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TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	3	OCT 07	EPFULL enhanced with full implementation of EPC2000
NEWS	4	OCT 07	Multiple databases enhanced for more flexible patent number searching
NEWS	5	OCT 22	Current-awareness alert (SDI) setup and editing enhanced
NEWS	6	OCT 22	WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications
NEWS	7	OCT 24	CHEMLIST enhanced with intermediate list of pre-registered REACH substances
NEWS	8	NOV 21	CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present
NEWS	9	NOV 26	MARPAT enhanced with FSORT command
NEWS	10	NOV 26	MEDLINE year-end processing temporarily halts availability of new fully-indexed citations
NEWS	11	NOV 26	CHEMSAFE now available on STN Easy
NEWS	12	NOV 26	Two new SET commands increase convenience of STN searching
NEWS	13	DEC 01	ChemPort single article sales feature unavailable
NEWS	14	DEC 12	GBFULL now offers single source for full-text coverage of complete UK patent families
NEWS	15	DEC 17	Fifty-one pharmaceutical ingredients added to PS
NEWS	16	JAN 06	The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo
NEWS	17	JAN 07	WPIDS, WPINDEX, and WPIX enhanced Japanese Patent Classification Data
NEWS EXPRESS	JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.		
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS LOGIN	Welcome Banner and News Items		
NEWS IPC8	For general information regarding STN implementation of IPC 8		

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 15:10:35 ON 12 JAN 2009

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

FILE 'CAPLUS' ENTERED AT 15:10:50 ON 12 JAN 2009

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FILE COVERS 1907 - 12 Jan 2009 VOL 150 ISS 3

FILE LAST UPDATED: 11 Jan 2009 (20090111/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> file reg

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.50	0.72

FILE 'REGISTRY' ENTERED AT 15:10:52 ON 12 JAN 2009

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 JAN 2009 HIGHEST RN 1093181-04-4

DICTIONARY FILE UPDATES: 11 JAN 2009 HIGHEST RN 1093181-04-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

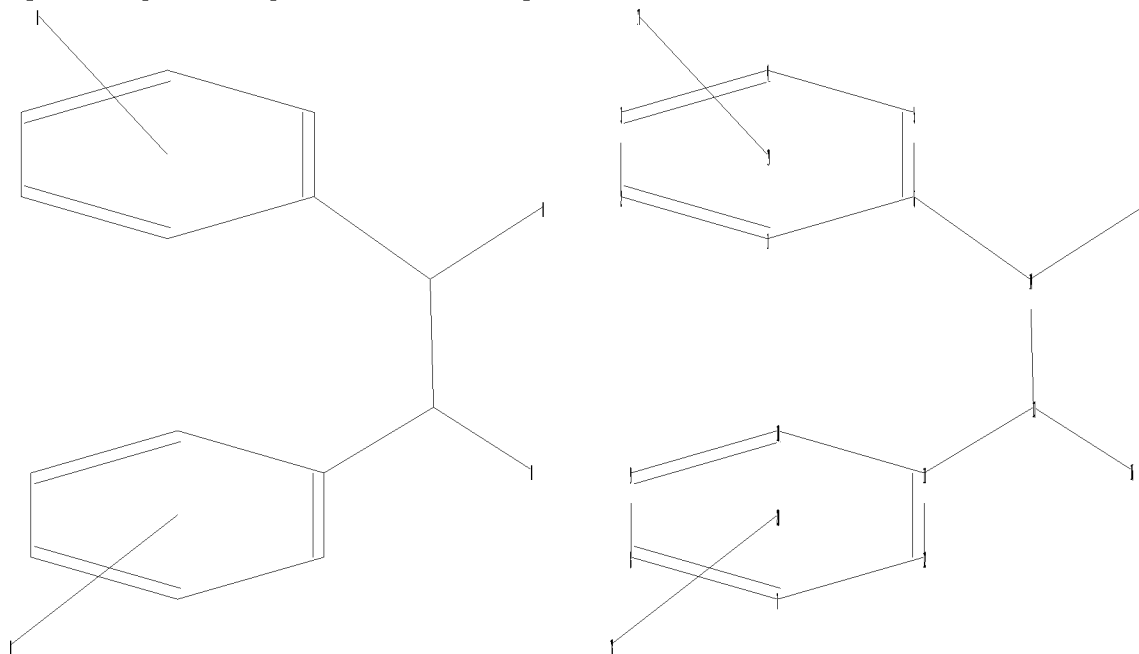
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10594744\Struc 1.str



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ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12
chain bonds :
6-14 11-13 13-14 13-16 14-15
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12
exact/norm bonds :
13-16 14-15
exact bonds :
6-14 11-13 13-14
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12
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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:Atom 20:Atom
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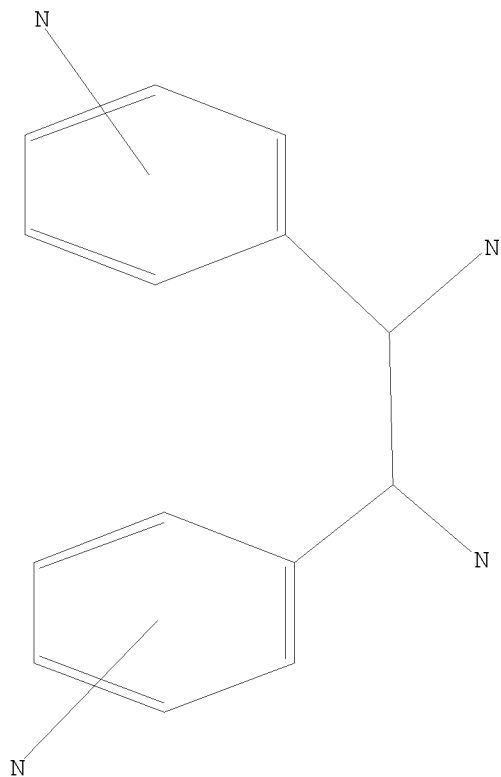
10594744.trn

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> l1

SAMPLE SEARCH INITIATED 15:11:07 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 324 TO ITERATE

100.0% PROCESSED 324 ITERATIONS

7 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 5401 TO 7559

PROJECTED ANSWERS: 7 TO 298

L2 7 SEA SSS SAM L1

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10594744.trn

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100.0% PROCESSED 6664 ITERATIONS 130 ANSWERS  
SEARCH TIME: 00.00.01

L3 130 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	185.88	186.60

FILE 'CAPLUS' ENTERED AT 15:11:12 ON 12 JAN 2009  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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FILE COVERS 1907 - 12 Jan 2009 VOL 150 ISS 3  
FILE LAST UPDATED: 11 Jan 2009 (20090111/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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=> 13

L4 44 L3

=> d ibib abs hitstr 1-44

L4 ANSWER 1 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:990627 CAPLUS

DOCUMENT NUMBER: 149:331995

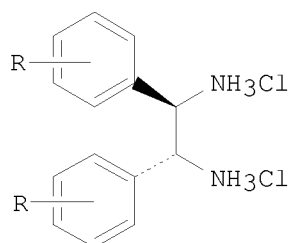
TITLE: Stereospecific Synthesis of C2 Symmetric Diamines from the Mother Diamine by Resonance-Assisted Hydrogen-Bond Directed Diaza-Cope Rearrangement

AUTHOR(S): Kim, Hyunwoo; Nguyen, Yen; Yen, Cindy Pai-Hui; Chagal, Leonid; Lough, Alan J.; Kim, B. Moon; Chin, Jik

CORPORATE SOURCE: Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.

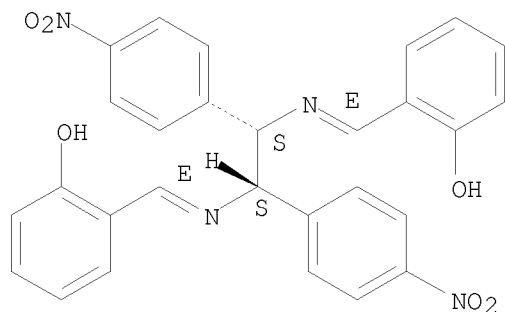
SOURCE: Journal of the American Chemical Society (2008), 130(36), 12184-12191

PUBLISHER: CODEN: JACSAT; ISSN: 0002-7863  
 DOCUMENT TYPE: American Chemical Society  
 LANGUAGE: Journal  
 GI English



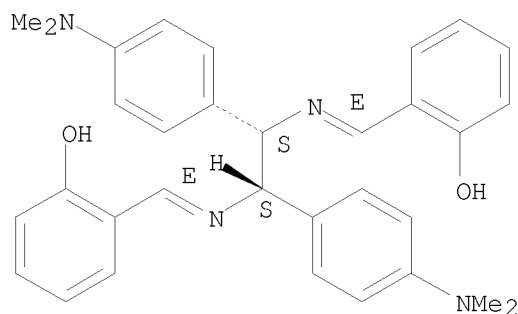
- AB Sixteen diphenylethylenediamine analogs, e.g. I (R = 2,3,4,5,6-F5, 4-O2N, 4-HO, etc.), including those with electron donating, electron withdrawing, and sterically bulky substituents have been prepared in good overall yields (70.apprx.90%) and in enantiomerically pure form (>99% ee) by diaza-Cope rearrangement reaction. A single chiral mother diamine ((R,R)-1,2-bis-(2-hydroxyphenyl)-1,2-diaminoethane) is reacted with appropriate aldehydes to form the initial diimines that rearrange to give all the product diimines in the (S,S) form. The daughter diamines are obtained by hydrolysis of the product diimines. D. functional theory computation shows that resonance-assisted hydrogen-bond is the main driving force behind all the rearrangement reactions. Chiral high performance liquid chromatog. and CD spectroscopy show that the highly stereospecific rearrangement reactions take place with apparent inversion of stereochem.
- IT 1052707-35-3P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (crystal structure and CD spectroscopy; stereoselective preparation of C2 sym. diphenylethylenediamines via diaza-Cope rearrangement of bis(2-hydroxyphenyl)diaminoethane with aldehydes)
- RN 1052707-35-3 CAPLUS
- CN Phenol, 2,2'-[[[(1S,2S)-1,2-bis(4-nitrophenyl)-1,2-ethanediyl]bis[(E)-nitrilomethylidyne]]bis- (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



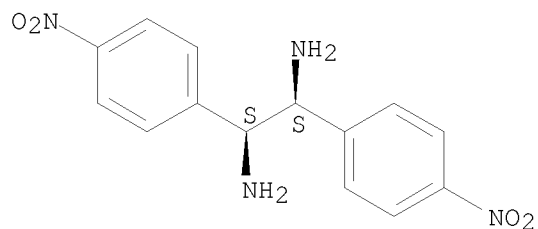
IT 1055301-88-6  
 RL: PRP (Properties)  
 (stereoselective preparation of C2 sym. diphenylethylenediamines via  
 diaza-Cope rearrangement of bis(2-hydroxyphenyl)diaminoethane with  
 aldehydes)  
 RN 1055301-88-6 CAPLUS  
 CN Phenol, 2,2'-[[[(1S,2S)-1,2-bis[4-(dimethylamino)phenyl]-1,2-  
 ethanediyl]bis[(E)-nitrilomethylidene]]bis- (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



IT 1052707-07-9P 1052707-17-1P 1052707-21-7P  
 1055301-08-0P 1055301-13-7P 1055301-15-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (stereoselective preparation of C2 sym. diphenylethylenediamines via  
 diaza-Cope rearrangement of bis(2-hydroxyphenyl)diaminoethane with  
 aldehydes)  
 RN 1052707-07-9 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, hydrochloride (1:2), (1S,2S)-  
 (CA INDEX NAME)

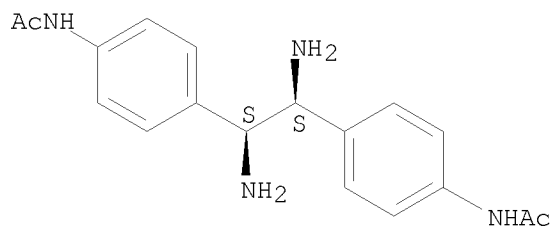
Absolute stereochemistry. Rotation (-).



● 2 HCl

RN 1052707-17-1 CAPLUS  
CN Acetamide, N,N'-[[ (1S,2S)-1,2-diamino-1,2-ethanediyl]di-4,1-phenylene]bis-, hydrochloride (1:2) (CA INDEX NAME)

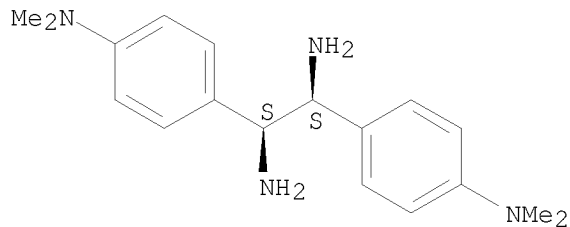
Absolute stereochemistry. Rotation (+).



● 2 HCl

RN 1052707-21-7 CAPLUS  
CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, hydrochloride (1:4), (1S,2S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



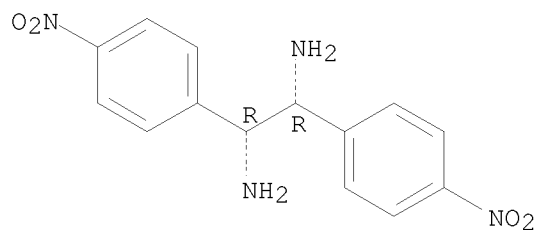
● 4 HCl

RN 1055301-08-0 CAPLUS  
CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, hydrochloride (1:2), (1R,2R)-



(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

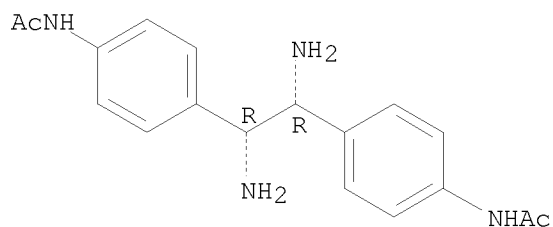


● 2 HCl

RN 1055301-13-7 CAPLUS

CN Acetamide, N,N'-[[ (1R,2R)-1,2-diamino-1,2-ethanediyl]di-4,1-phenylene]bis-, hydrochloride (1:2) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

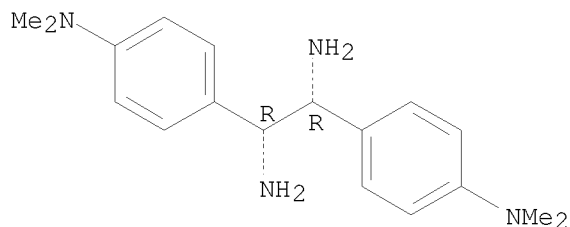


● 2 HCl

RN 1055301-15-9 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, hydrochloride (1:4), (1R,2R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



● 4 HCl

REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2008:674920 CAPLUS  
 DOCUMENT NUMBER: 149:32089  
 TITLE: Hydrogenation of esters with ru/bidentate ligands complexes  
 INVENTOR(S): Saudan, Lionel; Saudan, Christophe  
 PATENT ASSIGNEE(S): Firmenich SA, Switz.  
 SOURCE: PCT Int. Appl., 34pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008065588	A1	20080605	WO 2007-IB54746	20071122
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRIORITY APPLN. INFO.: WO 2006-IB54449 A 20061127

OTHER SOURCE(S): MARPAT 149:32089

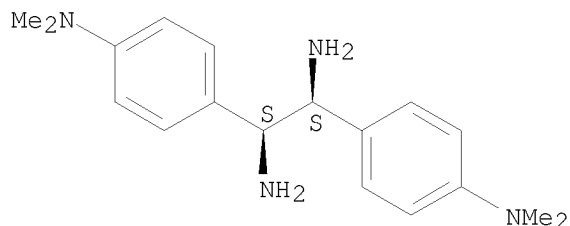
AB The present invention relates to processes for the reduction by hydrogenation, using mol. H<sub>2</sub>, of a substrate containing one or two esters, or lactones, functional groups into the corresponding alc., or diol, said process is carried out in the presence of a base and at least one catalyst or pre-catalyst in the form of a ruthenium complex, [Ru(PP)(NN)S<sub>2</sub>-nYn]Y<sub>2</sub>-n [wherein PP = a C<sub>6</sub>-60-diphosphine bidentate ligand (coordinated via two phosphine groups); NN = a C<sub>3</sub>-40-bidentate ligand (coordinated through two amino groups and whereby at least one amine group is a primary amine); S = neutral C<sub>1</sub>-26-neutral monodentate ligand; Y = H, halogen, BH<sub>4</sub>, AlH<sub>4</sub>, OH, C<sub>1</sub>-6-alkoxy, carboxyl radical; n = 0, 1, 2] comprising at least one substituted  $\alpha$ -carbon and one primary amine as one of the coordinating atoms. Thus, PhCO<sub>2</sub>Me was hydrogenated over [RuCl<sub>2</sub>{(R)-BINAP}{(S,S)-DPEN}] in THF containing NaOMe to give 77% PhCH<sub>2</sub>OH.

IT 1030609-64-3  
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (bidentate ligand for hydrogenolysis catalyst; hydrogenation of esters and lactones with ruthenium bidentate ligands complexes)

RN 1030609-64-3 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1S,2S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1354695 CAPLUS

DOCUMENT NUMBER: 148:54746

TITLE: Water-soluble chiral diamines as ligand of catalyst for asymmetric synthesis in aqueous media, and preparation method thereof

INVENTOR(S): Deng, Jingen; Li, Li; Zhu, Jin; Xue, Dong; Liao, Jian

PATENT ASSIGNEE(S): Chengdu Organic Chemical Co., Ltd., Chinese Academy of Sciences, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 29pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

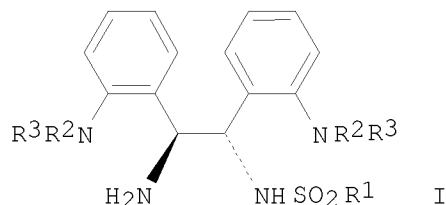
LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101074207	A	20071121	CN 2007-10111670	20070608
PRIORITY APPLN. INFO.:			CN 2006-10021128	A 20060608
OTHER SOURCE(S):	MARPAT	148:54746		

GI



AB The title water-soluble chiral diamines are N-monosulfonated 1,2-di-(2'-aminophenyl)-1,2-ethylenediamines, for example diamine I (R1 is (un)substituted Ph, naphthalen-1-yl or naphthalen-2-yl, C1-18 linear or branched alkyl, C3-8 cycloalkyl or heterocycloalkyl, or primary/secondary amino; R2, R3 and R4 are selected from H, C1-18 linear or branched alkyl, and C3-8 cycloalkyl or heterocycloalkyl; X is F-, Cl-, Br-, I-, HSO4-, SbF6-, BF4-, or CF3CO2-; and n is an integer of 1-20), or derivs. and salts thereof. The chiral diamines can be prepared by nitrifying optically

pure 1,2-diphenylethylenediamine with concentrated nitric acid and reacting with R1SO2Cl for sulfonation; directly hydrogenating in the presence of Pd/C to obtain N-monosulfonated 1,2-diphenylethylenediamine, or protecting the amino groups with Boc20 groups, hydrogenating in the presence of Pd/C to get amine compound, performing alkylation on the amine groups, and removing the Boc group under acidic condition to obtain I. Complex of the inventive chiral diamines and metal can be used as catalyst for asym. hydrogenation-reduction of ketones and imines in aqueous media. When the inventive chiral diamines are used as catalyst ligand in aqueous reaction, no organic solvent is required; thus green synthesis can be achieved.

IT 950184-80-2P 960075-12-1P 960075-13-2P

960075-15-4P 960075-17-6P 960075-19-8P

960075-21-2P 960075-22-3P 960075-23-4P

960075-24-5P 960075-25-6P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

USES (Uses)

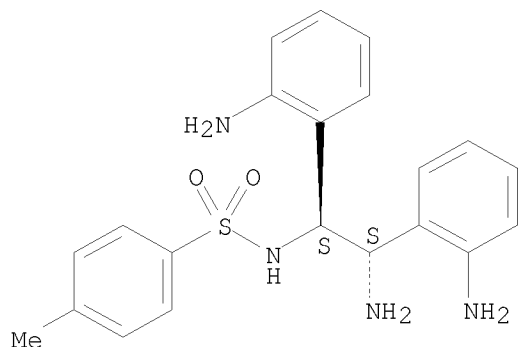
(preparation of water-soluble chiral diamines as ligand of catalyst for asym.

synthesis in aqueous media)

RN 950184-80-2 CAPLUS

CN Benzenesulfonamide, N-[(1S,2S)-2-amino-1,2-bis(2-aminophenyl)ethyl]-4-methyl- (CA INDEX NAME)

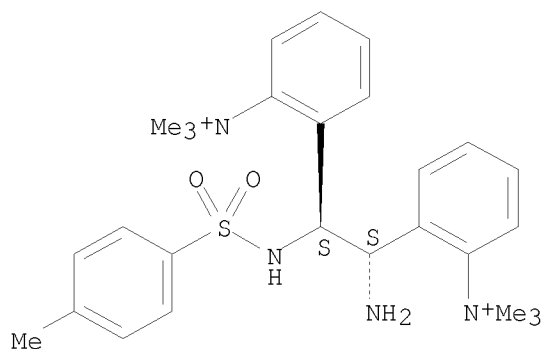
Absolute stereochemistry.



RN 960075-12-1 CAPLUS

CN Benzenaminium, 2,2'-[(1S,2S)-1-amino-2-[[[4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis[N,N,N-trimethyl-, chloride (1:2) (CA INDEX NAME)

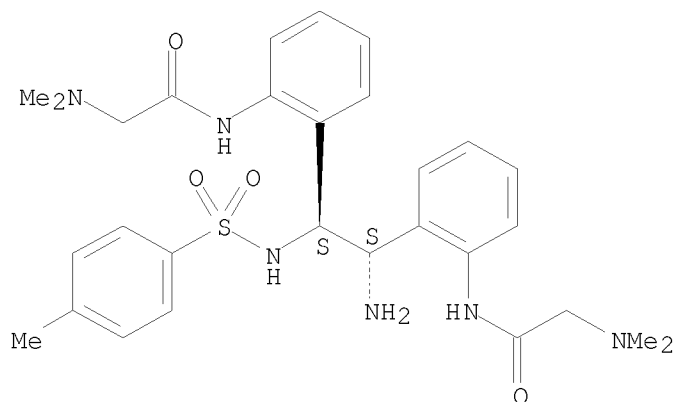
Absolute stereochemistry.



● 2 Cl<sup>-</sup>

RN 960075-13-2 CAPLUS  
 CN Acetamide, N,N'-[[ (1S,2S)-1-amino-2-[[ (4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[2-(dimethylamino)- (CA INDEX NAME)

Absolute stereochemistry.

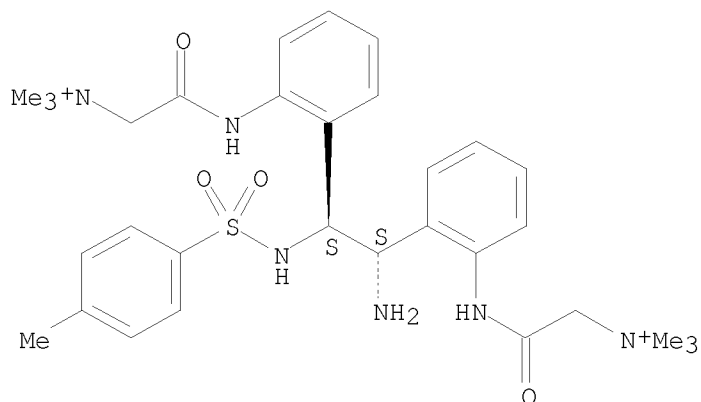


RN 960075-15-4 CAPLUS  
 CN Ethanaminium, 2,2'-[[ (1S,2S)-1-amino-2-[[ (4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis(2,1-phenyleneimino)]bis[N,N,N-trimethyl-2-oxo-, 2,2,2-trifluoroacetate (1:2) (CA INDEX NAME)

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CRN 960075-14-3  
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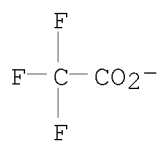
Absolute stereochemistry.



CM 2

CRN 14477-72-6

CMF C2 F3 O2



RN 960075-17-6 CAPLUS

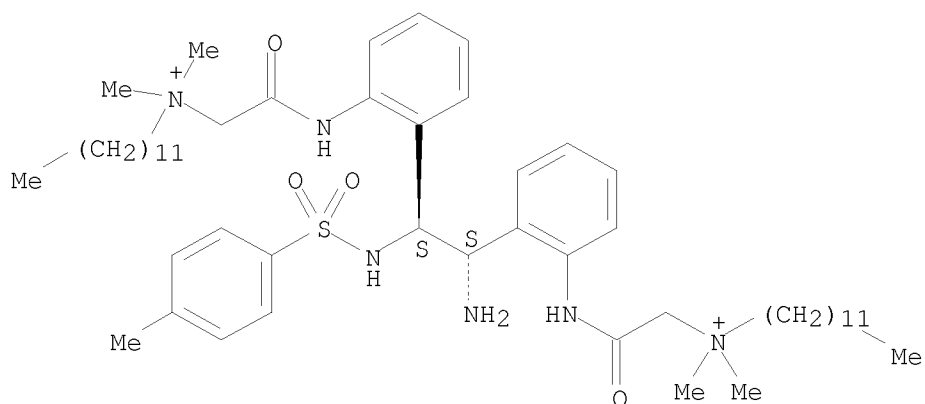
CN 1-Dodecanaminium, N,N'-[[[(1S,2S)-1-amino-2-[[[4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis[2,1-phenyleneimino(2-oxo-2,1-ethanediyl)]]bis[N,N-dimethyl-, 2,2,2-trifluoroacetate (1:2) (CA INDEX NAME)

CM 1

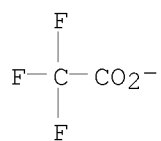
CRN 960075-16-5

CMF C53 H88 N6 O4 S

Absolute stereochemistry.

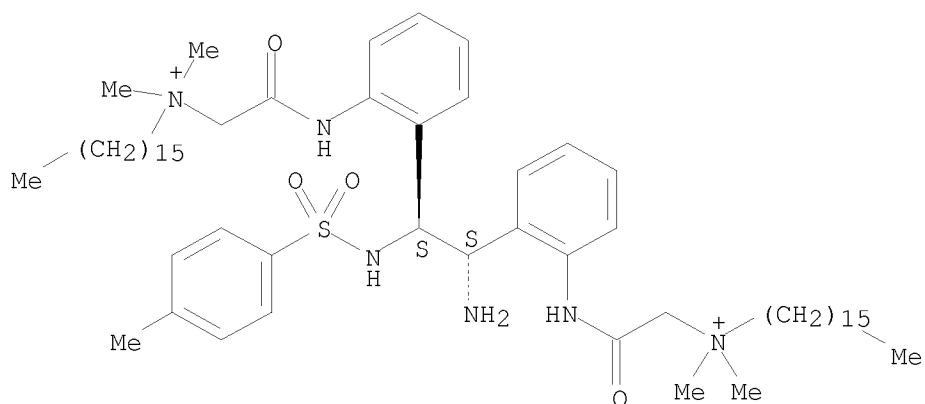


CRN 14477-72-6  
CMF C2 F3 O2



CRN 960075-18-7  
CMF C61 H104 N6 O4 S

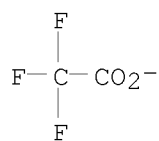
Absolute stereochemistry.



CM 2

CRN 14477-72-6

CMF C2 F3 O2



RN 960075-21-2 CAPLUS

CN 1-Dodecanaminium, 12,12'-[[[(1S,2S)-1-amino-2-[[[4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis(2,1-phenyleneimino)]]bis[N,N,N-trimethyl-12-oxo-, 2,2,2-trifluoroacetate (1:2)  
(CA INDEX NAME)

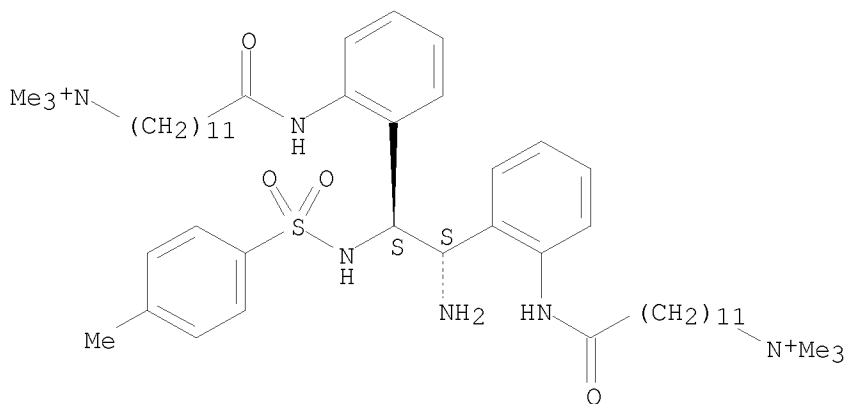
CM 1

CRN 960075-20-1

CMF C51 H84 N6 O4 S

Absolute stereochemistry.

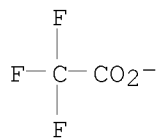




CM 2

CRN 14477-72-6

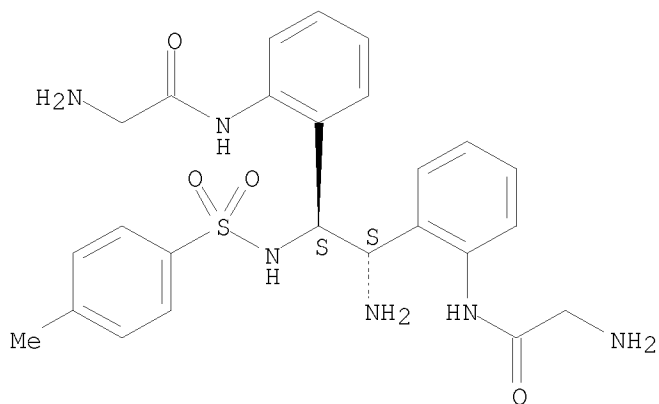
CMF C2 F3 O2



RN 960075-22-3 CAPLUS

CN    Acetamide, N,N'-[[[(1S,2S)-1-amino-2-[[[(4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[2-amino-    (CA INDEX NAME)

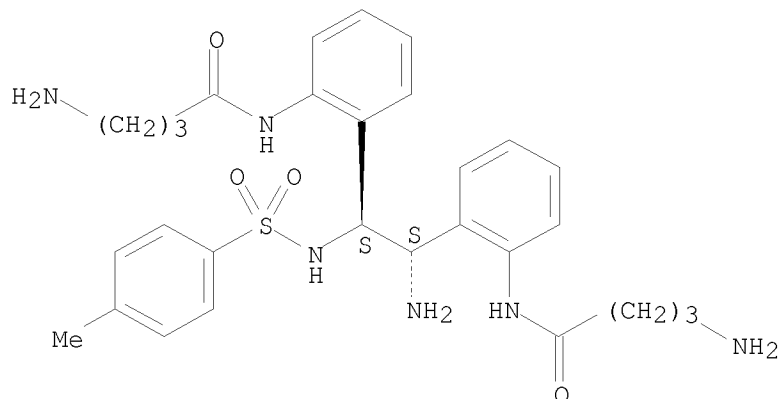
Absolute stereochemistry.



RN 960075-23-4 CAPLUS

CN Butanamide, N,N'-[[ (1S,2S)-1-amino-2-[[ (4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[4-amino- (CA INDEX NAME)

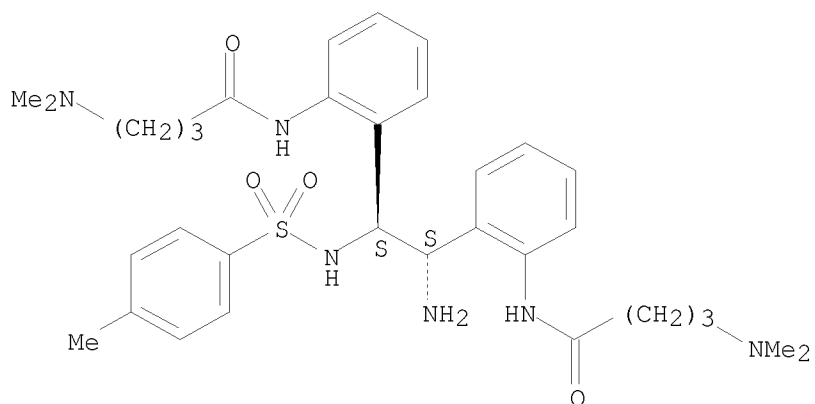
Absolute stereochemistry.



RN 960075-24-5 CAPLUS

CN Butanamide, N,N'-[[[(1S,2S)-1-amino-2-[[[4-methylphenyl]sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[4-(dimethylamino)- (CA INDEX NAME)

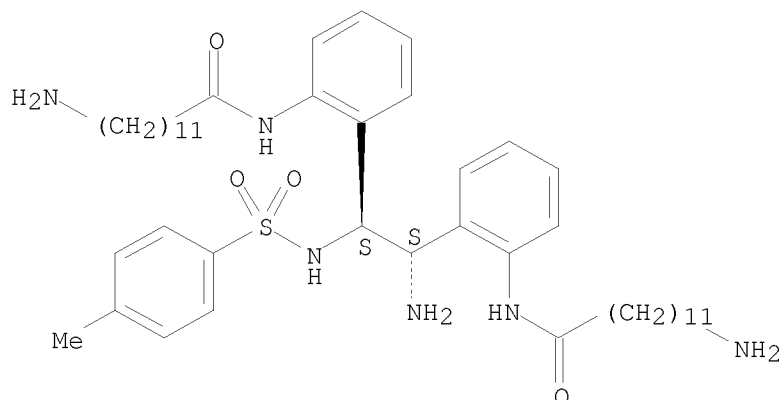
Absolute stereochemistry.



RN 960075-25-6 CAPLUS

CN Dodecanamide, N,N'-[[[(1S,2S)-1-amino-2-[[[4-methylphenyl]sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[12-amino- (CA INDEX NAME)

Absolute stereochemistry.



IT 960075-26-7

RL: RCT (Reactant); RACT (Reactant or reagent)

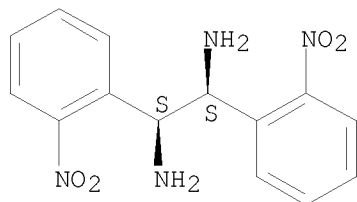
(preparation of water-soluble chiral diamines as ligand of catalyst for asym.

synthesis in aqueous media)

RN 960075-26-7 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(2-nitrophenyl)-, (1S,2S)- (CA INDEX NAME)

Absolute stereochemistry.



IT 960075-27-8P 960075-28-9P 960075-29-0P

960075-30-3P 960075-31-4P 960075-32-5P

960075-33-6P 960075-34-7P 960075-35-8P

960075-36-9P 960075-37-0P 960075-39-2P

960075-40-5P 960075-41-6P 960075-42-7P

960075-43-8P 960075-44-9P 960075-45-0P

960075-46-1P 960075-48-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

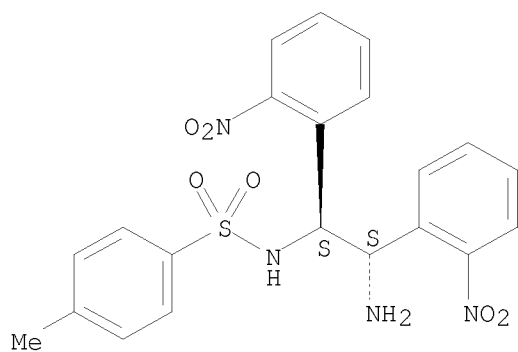
(preparation of water-soluble chiral diamines as ligand of catalyst for asym.

synthesis in aqueous media)

RN 960075-27-8 CAPLUS

CN Benzenesulfonamide, N-[(1S,2S)-2-amino-1,2-bis(2-nitrophenyl)ethyl]-4-methyl- (CA INDEX NAME)

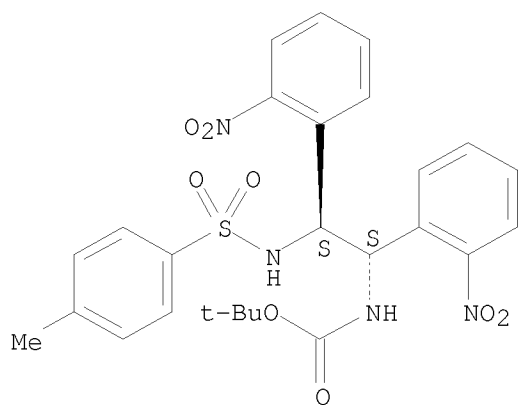
Absolute stereochemistry.



RN 960075-28-9 CAPLUS

CN Carbamic acid, N-[(1S,2S)-2-[[[(4-methylphenyl)sulfonyl]amino]-1,2-bis(2-nitrophenyl)ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

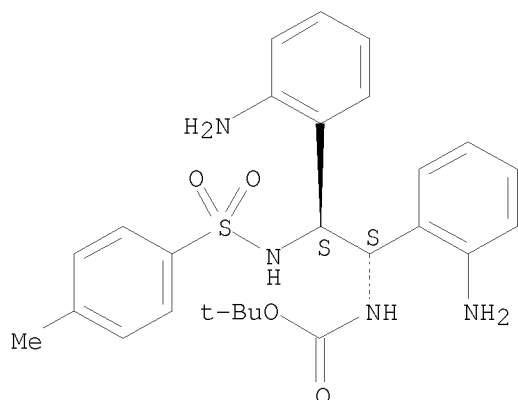
Absolute stereochemistry.



RN 960075-29-0 CAPLUS

CN Carbamic acid, N-[(1S,2S)-1,2-bis(2-aminophenyl)-2-[[[(4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

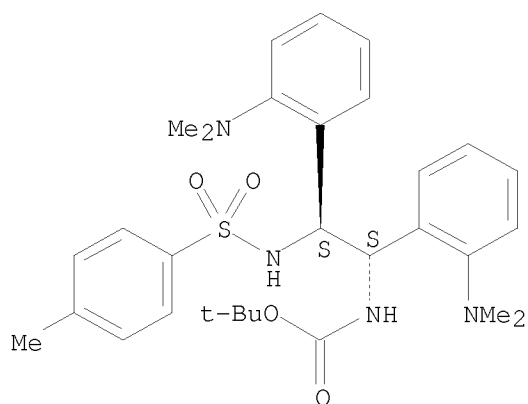
Absolute stereochemistry.



RN 960075-30-3 CAPLUS

CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-(dimethylamino)phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

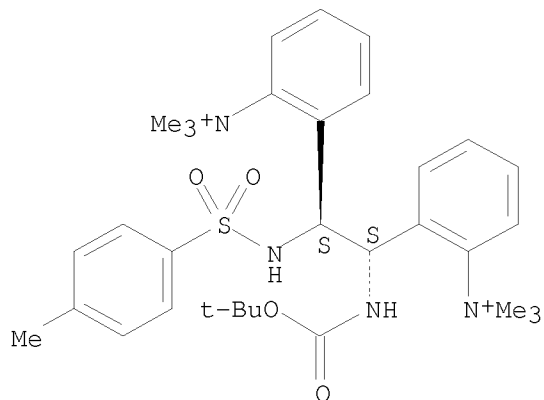
Absolute stereochemistry.



RN 960075-31-4 CAPLUS

CN Benzenaminium, 2,2'-[(1S,2S)-1-[[1,1-dimethylethoxy)carbonyl]amino]-2-[[4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis[N,N,N-trimethyl-, iodide (1:2) (CA INDEX NAME)

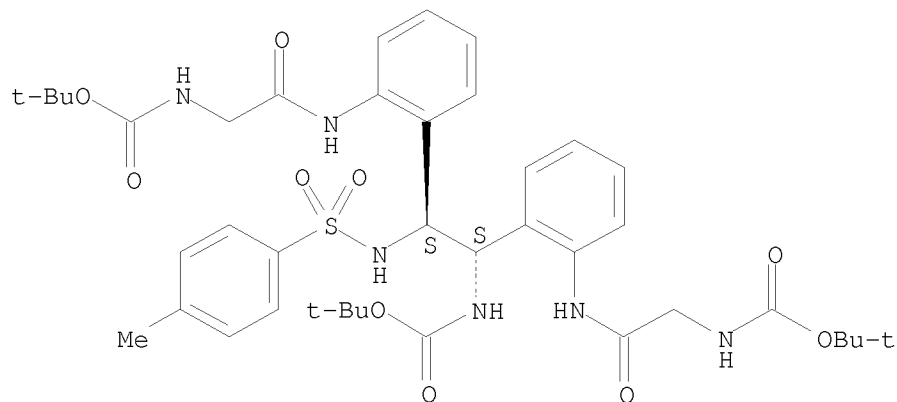
Absolute stereochemistry.



● 2 I<sup>-</sup>

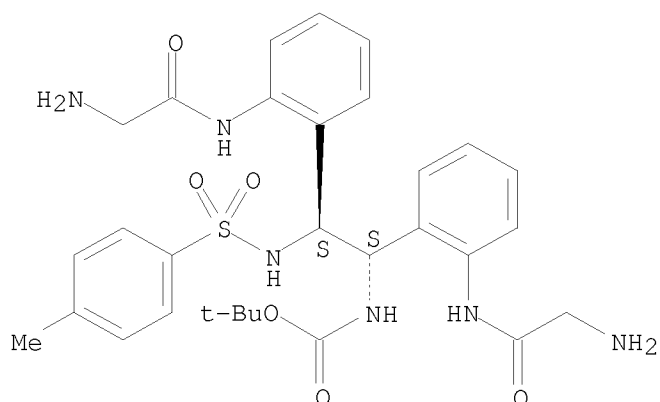
RN 960075-32-5 CAPLUS  
 CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[[2-[[[(1,1-dimethylethoxy)carbonyl]amino]acetyl]amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.



RN 960075-33-6 CAPLUS  
 CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[(2-aminoacetyl)amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

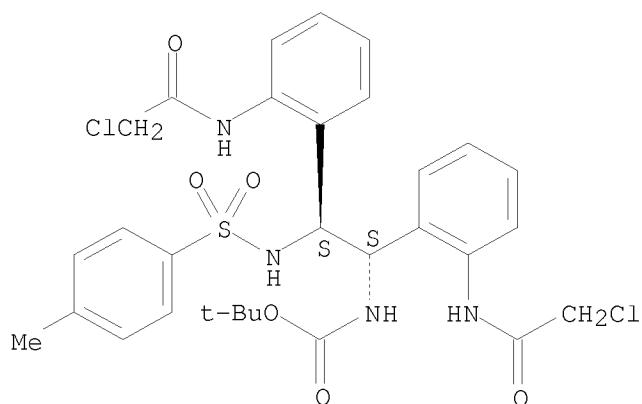
Absolute stereochemistry.



RN 960075-34-7 CAPLUS

CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[(2-chloroacetyl)amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

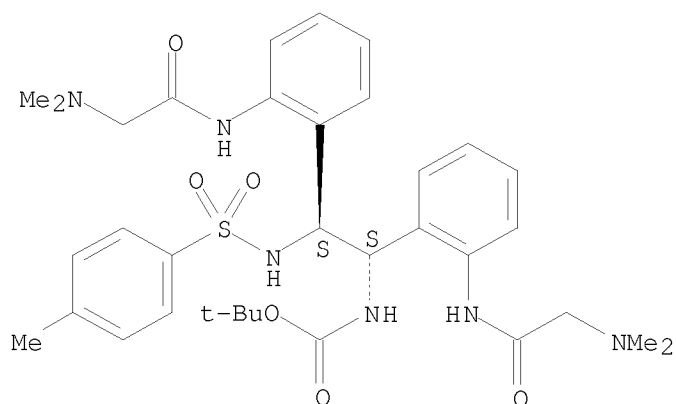
Absolute stereochemistry.



RN 960075-35-8 CAPLUS

CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[[2-(dimethylamino)acetyl]amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.

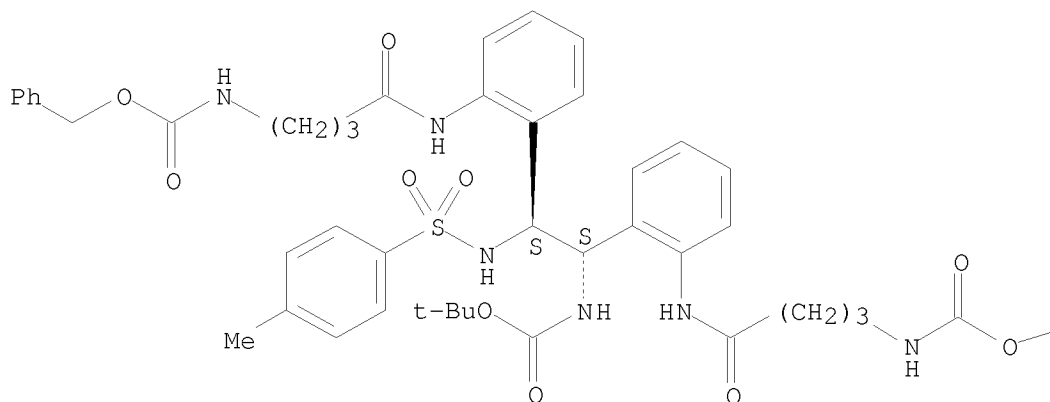


RN 960075-36-9 CAPLUS

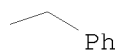
CN Carbamic acid, N-[4-[[2-[(1S,2S)-1-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-[[[(4-methylphenyl)sulfonyl]amino]-2-[2-[[1-oxo-4-[[[(phenylmethoxy)carbonyl]amino]butyl]amino]phenyl]ethyl]phenyl]amino]-4-oxobutyl]-, phenylmethyl ester (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

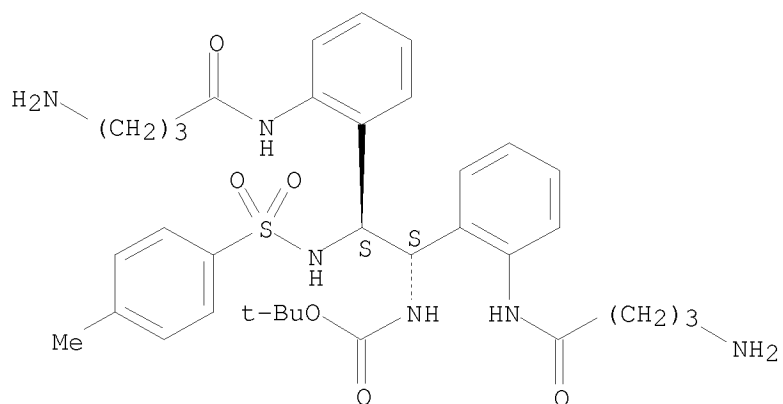






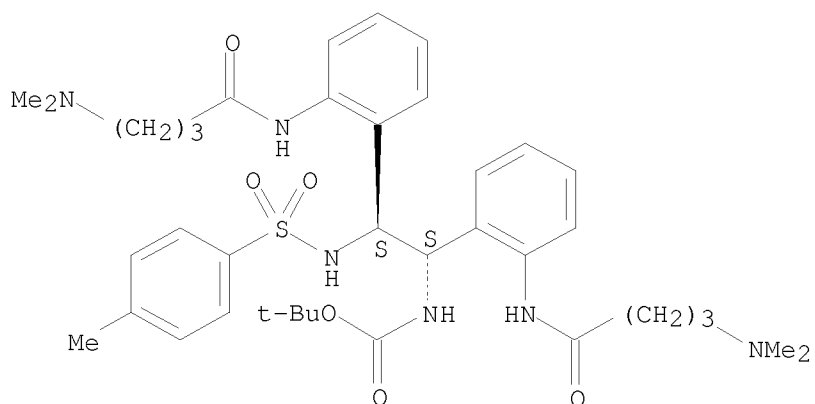
RN 960075-37-0 CAPLUS  
 CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[(4-amino-1-oxobutyl)amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.



RN 960075-39-2 CAPLUS  
 CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[[4-(dimethylamino)-1-oxobutyl]amino]phenyl]-2-[[4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.

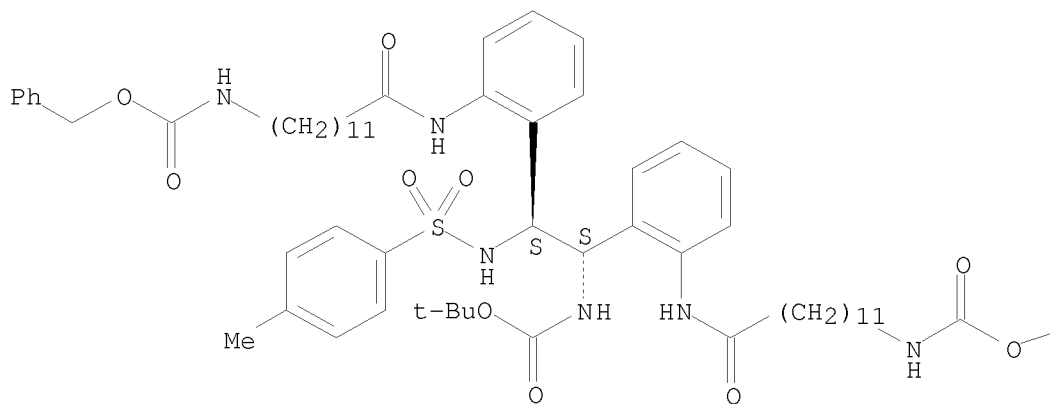


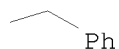
RN 960075-40-5 CAPLUS

CN Carbamic acid, N-[12-[[2-[(1S,2S)-1-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-[[[(4-methylphenyl)sulfonyl]amino]-2-[2-[[1-oxo-12-[[[(phenylmethoxy)carbonyl]amino]dodecyl]amino]phenyl]ethyl]phenyl]amino]-12-oxododecyl]-, phenylmethyl ester (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

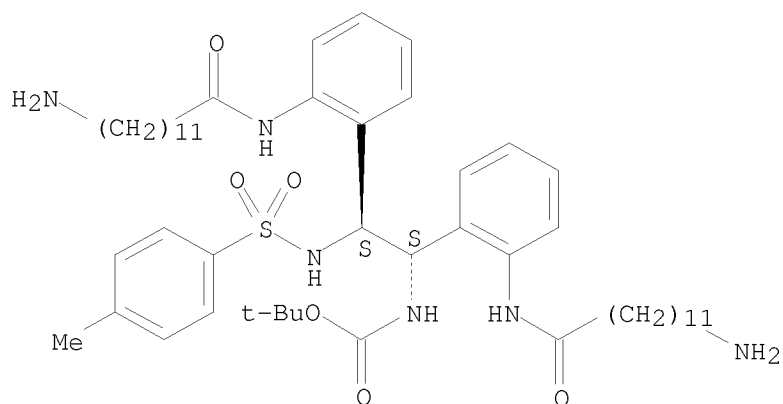




RN 960075-41-6 CAPLUS

CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[(12-amino-1-oxododecyl)amino]phenyl]-2-[(4-methylphenyl)sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

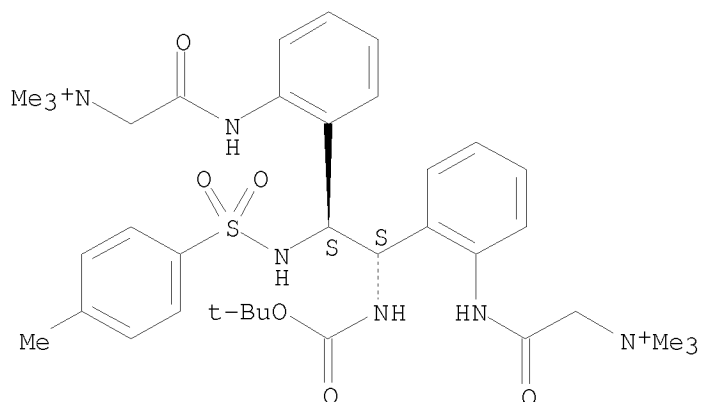
Absolute stereochemistry.



RN 960075-42-7 CAPLUS

CN Ethanaminium, 2,2'-[[[(1S,2S)-1-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-[[[(4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]bis(2,1-phenyleneimino)]]bis[N,N,N-trimethyl-2-oxo-, iodide (1:2)] (CA INDEX NAME)

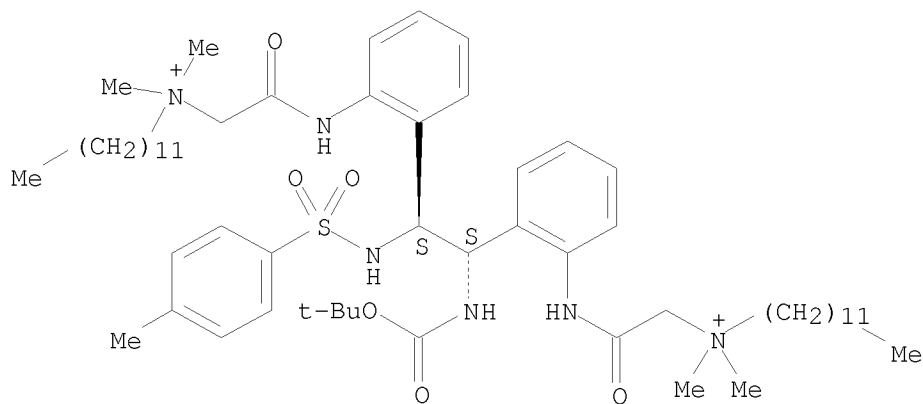
Absolute stereochemistry.



● 2 I<sup>-</sup>

RN 960075-43-8 CAPLUS  
 CN 1-Dodecanaminium, N,N'-[[[(1S,2S)-1-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-[[[(4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]]bis[2,1-phenyleneimino(2-oxo-2,1-ethanediyl)]]bis[N,N-dimethyl-, iodide (1:2) (CA INDEX NAME)

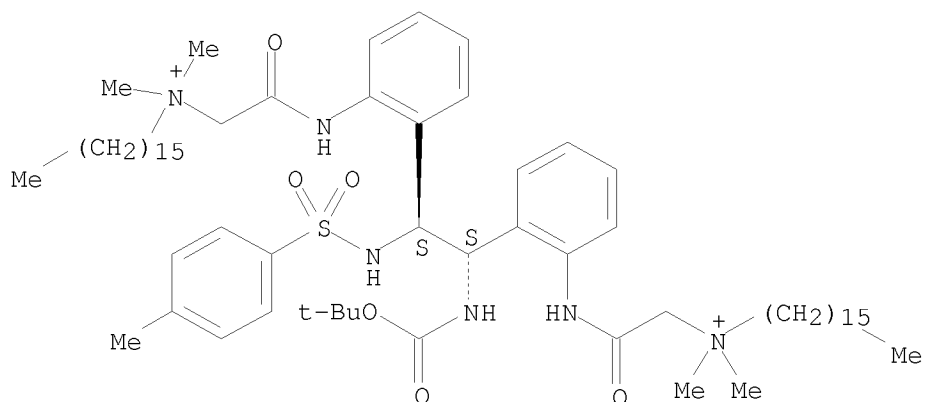
Absolute stereochemistry.



● 2 I<sup>-</sup>

RN 960075-44-9 CAPLUS  
 CN 1-Hexadecanaminium, N,N'-[[[(1S,2S)-1-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-[[[(4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]]bis[2,1-phenyleneimino(2-oxo-2,1-ethanediyl)]]bis[N,N-dimethyl-, iodide (1:2) (CA INDEX NAME)

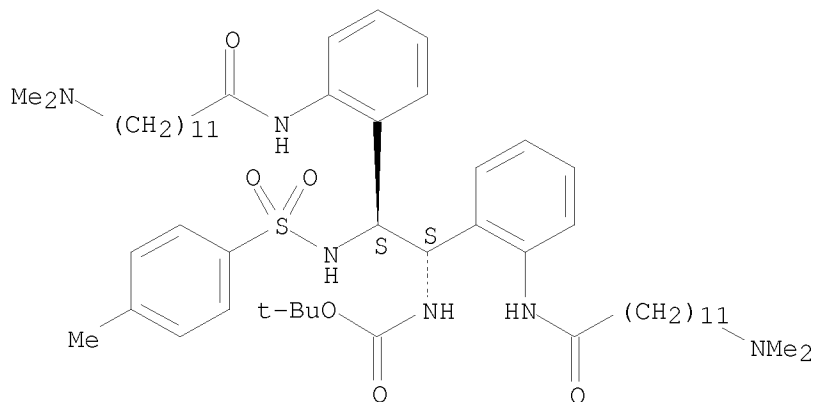
Absolute stereochemistry.



●2 I<sup>-</sup>

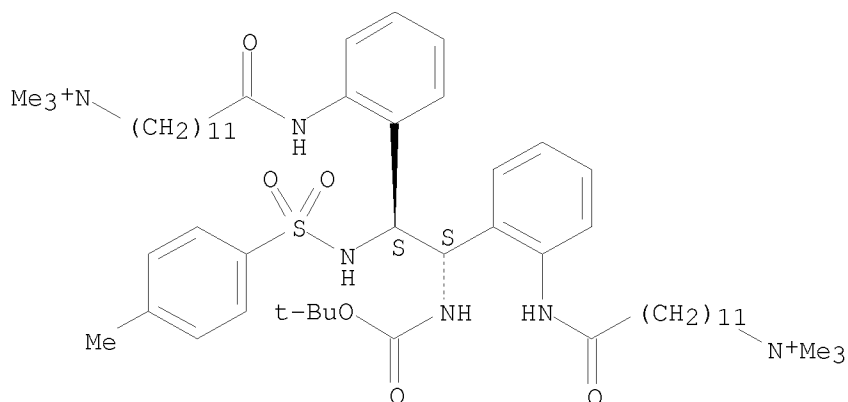
RN 960075-45-0 CAPLUS  
 CN Carbamic acid, N-[(1S,2S)-1,2-bis[2-[[12-(dimethylamino)-1-oxododecyl]amino]phenyl]-2-[[4-methylphenyl]sulfonyl]amino]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.



RN 960075-46-1 CAPLUS  
 CN 1-Dodecanaminium, 12,12'-[[[(1S,2S)-1-[[1,1-dimethylethoxy]carbonyl]amino]-2-[[4-methylphenyl]sulfonyl]amino]-1,2-ethanediyl]bis(2,1-phenyleneimino)]bis[N,N,N-trimethyl-12-oxo-, iodide (1:2) (CA INDEX NAME)

Absolute stereochemistry.



● 2 I<sup>-</sup>

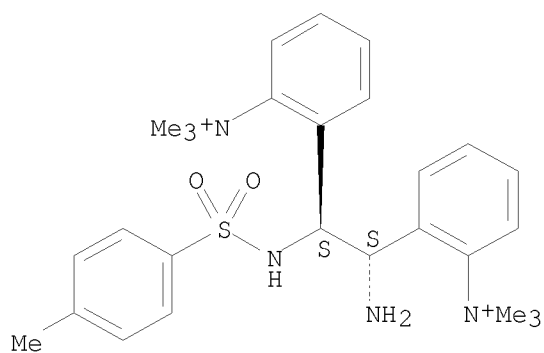
RN 960075-48-3 CAPLUS  
 CN Benzenaminium, 2,2'-[(1S,2S)-1-amino-2-[[4-methylphenyl)sulfonyl]amino]-  
 1,2-ethanediyl]bis[N,N,N-trimethyl-, 2,2,2-trifluoroacetate (1:2) (CA  
 INDEX NAME)

CM 1

CRN 960075-47-2

CMF C27 H38 N4 O2 S

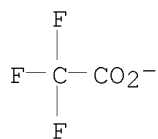
Absolute stereochemistry.



CM 2

CRN 14477-72-6

CMF C2 F3 O2



L4 ANSWER 4 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:10340 CAPLUS

DOCUMENT NUMBER: 147:385675

TITLE: Asymmetric transfer hydrogenation of ketones and imines with novel water-soluble chiral diamine as ligand in neat water

AUTHOR(S): Li, Li; Wu, Jiashou; Wang, Fei; Liao, Jian; Zhang, Hua; Lian, Chunxia; Zhu, Jin; Deng, Jingen

CORPORATE SOURCE: Key Laboratory of Asymmetric Synthesis and Chirotechnology of Sichuan Province, Union Lab. of Asymmetric Synthesis, Chinese Academy of Sciences, Chengdu, 610041, Peop. Rep. China

SOURCE: Green Chemistry (2007), 9(1), 23-25

CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:385675

AB A novel water-soluble rhodium(III) catalyst prepared from o,o'-aminated N-tosyl-1,2-diphenylethylenediamine and [Cp\*RhCl<sub>2</sub>]<sub>2</sub>, which was efficient for the asym. transfer hydrogenation of ketones and imines in neat water with high reactivity and excellent enantioselectivity, has been developed.

IT 950184-80-2

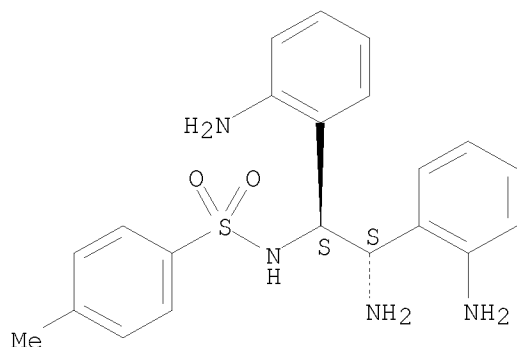
RL: CAT (Catalyst use); USES (Uses)

(asym. transfer hydrogenation of ketones and imines with water-soluble chiral diamine as ligand in water)

RN 950184-80-2 CAPLUS

CN Benzenesulfonamide, N-[(1S,2S)-2-amino-1,2-bis(2-aminophenyl)ethyl]-4-methyl- (CA INDEX NAME)

Absolute stereochemistry.



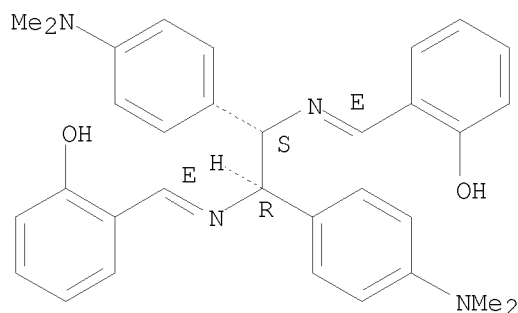
REFERENCE COUNT:

18

THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1185240 CAPLUS  
 DOCUMENT NUMBER: 144:36055  
 TITLE: Preorganization in Highly Enantioselective Diaza-Cope  
 Rearrangement Reaction  
 AUTHOR(S): Kim, Hae-Jo; Kim, Hyunwoo; Alhakimi, Gamil; Jeong, Eui  
 June; Thavarajah, Nirusha; Studnicki, Lisa;  
 Koprianiuk, Alicja; Lough, Alan J.; Suh, Junghun;  
 Chin, Jik  
 CORPORATE SOURCE: Department of Chemistry, University of Toronto,  
 Toronto, M5S 3H6, Can.  
 SOURCE: Journal of the American Chemical Society (2005),  
 127(47), 16370-16371  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 144:36055  
 AB Crystal structure and activation entropy data indicate that H-bond  
 directed diaza-Cope rearrangement of chiral diimines takes place with a  
 high degree of preorganization. CD spectroscopy and HPLC data show that  
 there is inversion of stereochem. for the reaction with excellent  
 enantioselectivity.  
 IT 870762-41-7P 870762-43-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preorganization in highly enantioselective H-bond directed diaza-Cope  
 rearrangement reaction of chiral diimines)  
 RN 870762-41-7 CAPLUS  
 CN Phenol, 2,2'-[[[(1R,2S)-1,2-bis[4-(dimethylamino)phenyl]-1,2-  
 ethanediyl]bis[(E)-nitrilomethylidyne]]bis-, rel- (9CI) (CA INDEX NAME)

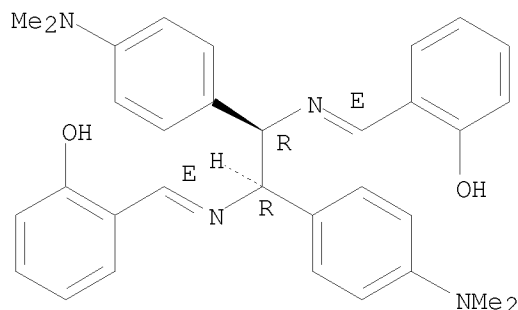
Relative stereochemistry.  
 Double bond geometry as shown.



RN 870762-43-9 CAPLUS  
 CN Phenol, 2,2'-[[[(1R,2R)-1,2-bis[4-(dimethylamino)phenyl]-1,2-  
 ethanediyl]bis[(E)-nitrilomethylidyne]]bis-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry as shown.





REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1075754 CAPLUS

DOCUMENT NUMBER: 143:378576

TITLE: Preparation of optically active transition metal/  
diamine complex and process for producing optically  
active alcohol with the complex

INVENTOR(S): Amano, Akira; Igarashi, Daisuke; Sayo, Noboru

PATENT ASSIGNEE(S): Takasago International Corporation, Japan

SOURCE: PCT Int. Appl., 64 pp.

CODEN: PIXXD2

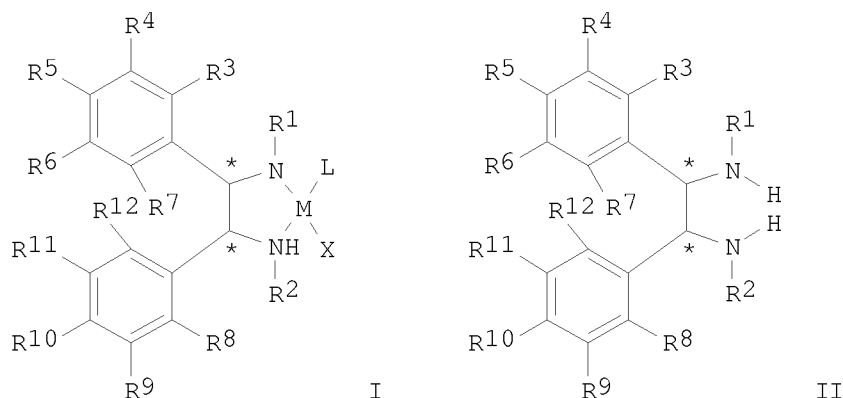
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

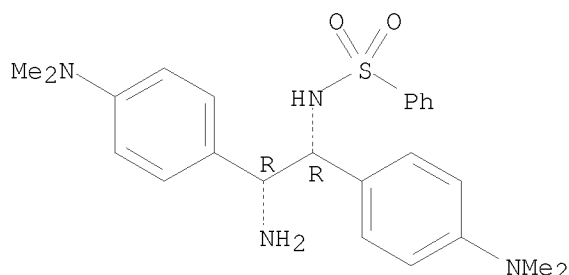
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005092830	A1	20051006	WO 2005-JP5728	20050328
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 20070149831	A1	20070628	US 2006-594744	20060929
PRIORITY APPLN. INFO.:			JP 2004-96472	A 20040329
			WO 2005-JP5728	W 20050328
OTHER SOURCE(S):	MARPAT 143:378576			
GI				



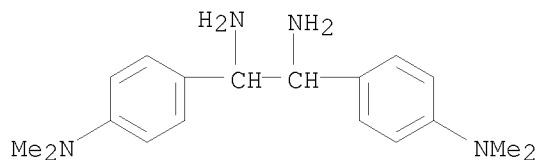
AB A water-soluble, optically active transition metal/diamine complex represented by the general formula (I) [wherein R1 and R2 each represents hydrogen, a hydrocarbon group, -SO<sub>2</sub>R<sub>13</sub> (wherein R<sub>13</sub> = optionally substituted hydrocarbon group, substituted amino, camphoryl); R3 to R12 each represents hydrogen, an each optionally substituted hydrocarbon group, alkoxy, aryloxy, or aralkyloxy or substituted amino; M represents a transition metal; X represents halogeno; L represents a ligand; and \* indicates asym. carbon; provided that at least one of R3 to R7 and R8 to R12 is substituted amino] and an optically active diamine compound (II) (R2-R13) constituting the ligand of the complex are prepared. The optically active transition metal/diamine complex is useful as a catalyst for asym. synthesis and can be easily separated from reaction products through liquid separation, etc. and is recyclable. A process for producing an optically active alc. comprises using the catalyst I for asym. reduction of a ketone. Thus, a solution of 26.76 g 4-dimethylaminobenzaldehyde in 80 mL THF was added to a mixture of 10.4 g hydrazine sulfate, 78 mL H<sub>2</sub>O, and 28% aqueous NH<sub>3</sub> at ≤40° over 2 h, stirred at ≤40° for 2-3 h, treated with 28% aqueous NH<sub>3</sub> to make the aqueous layer alkali, treated with 100 mL toluene, cooled to 10°, and filtered to give 19.75 g 4,4'-bis(dimethylamino)benzazine (III) (83.9%). A mixture of Zn powder (19.6 g) and 300 mL THF was treated dropwise with 28.45 g TiCl<sub>4</sub> III at -40° over 40 min at ≤40°, stirred at the same temperature for 30 min and then at -30 to -25° for 1 h, treated with 8.82 g III at -25°, stirred for 3 h while the temperature was raised to room temperature, and left to stand overnight to give, after workup, crude 1,2-bis[4-(dimethylamino)phenyl]ethane-1,2-diamine (IV). IV (3.48 g) was converted into the HCl salt and then back into racemic free amine (1.04 g) which was separated twice by HPLC using a Chiralcel OD-H column to give 63.1 mg (1R,2R)-1,2-bis[4-(dimethylamino)phenyl]ethane-1,2-diamine which (50 mg) was mixed with 17.7 mg Et<sub>3</sub>N in 1 mL CH<sub>2</sub>Cl<sub>2</sub>, treated with portionwise with a solution of 28.1 mg benzenesulfonyl chloride in 1 mL CH<sub>2</sub>Cl<sub>2</sub> under ice-cooling, and stirred at the same temperature for 1 h to give, after purification by TLC, 57.4 mg (1R,2R)-N-(benzenesulfonyl)-1,2-bis[4-(dimethylamino)phenyl]ethane-1,2-diamine (V). A mixture of V (4 mg), 1.86 mg [RuCl<sub>2</sub>(mesitylene)]<sub>2</sub>, 0.45 g sodium formate, and 4 mL H<sub>2</sub>O was treated with 0.2 g acetophenone, stirred at 50° for 2.5 h to give 0.19 g (R)-1-phenethyl alc. (optical purity 90.78% ee).

IT 866267-88-1P, (1R,2R)-N-(Benzenesulfonyl)-1,2-bis[4-(dimethylamino)phenyl]ethane-1,2-diamine  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (preparation of optically active transition metal-diamine complex as catalyst for asym. reduction of ketone to optically active alc.)  
 RN 866267-88-1 CAPLUS  
 CN Benzenesulfonamide, N-[(1R,2R)-2-amino-1,2-bis[4-(dimethylamino)phenyl]ethyl]- (CA INDEX NAME)

Absolute stereochemistry.

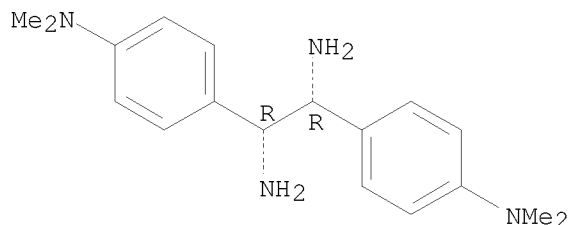


IT 93696-34-5P, 1,2-Bis[4-(dimethylamino)phenyl]ethane-1,2-diamine  
 866267-84-7P, (1R,2R)-1,2-Bis[4-(dimethylamino)phenyl]ethane-1,2-diamine 866267-86-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of optically active transition metal-diamine complex as catalyst for asym. reduction of ketone to optically active alc.)  
 RN 93696-34-5 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]- (CA INDEX NAME)

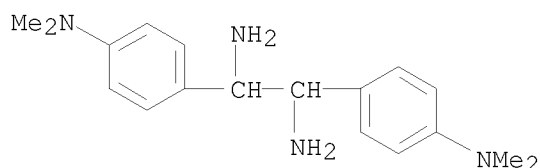


RN 866267-84-7 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 866267-86-9 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, hydrochloride (9CI)  
 (CA INDEX NAME)



● x HCl

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:811959 CAPLUS  
 DOCUMENT NUMBER: 144:292351  
 TITLE: Stereoselective synthesis of  
 1,2-diamino-1,2-diarylethane derivatives  
 AUTHOR(S): Bessonov, I. V.; Lozinskaya, N. A.; Katashova, V. R.;  
 Proskurnina, M. V.; Zefirov, N. S.  
 CORPORATE SOURCE: Department of Chemistry, M. V. Lomonosov Moscow State  
 University, Moscow, 119992, Russia  
 SOURCE: Russian Chemical Bulletin (2005), 54(1), 211-214  
 CODEN: RCBUEY; ISSN: 1066-5285  
 PUBLISHER: Springer Science+Business Media, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 144:292351

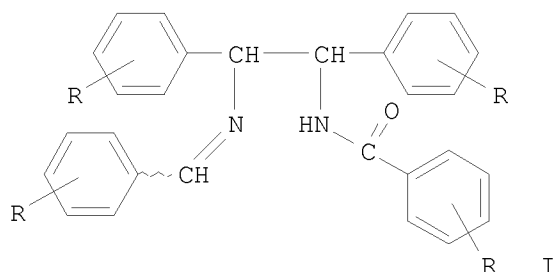
AB A procedure was developed for selective opening of the  
 cis-2,4,5-triarylimidazoline ring to form  
 erythro-1,2-diamino-1,2-diarylethane derivs. These ring-opening products,  
 erythro-ethylenediamine derivs., can undergo quant. isomerization to  
 threo-ethylenediamine derivs. in the presence of strong bases in DMSO.

IT 872411-72-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (stereoselective synthesis of aryethylenediamines by ring-opening of  
 arylimidazolines with aromatic aldehydes)

RN 872411-72-8 CAPLUS



SOURCE: Bashkirskii Khimicheskii Zhurnal (2004), 11(5), 12  
 CODEN: BKZHFU; ISSN: 0869-8406  
 PUBLISHER: Izdatel'stvo "Reaktiv"  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 144:88023  
 GI



AB Treatment of the title compds. (erythro-I; R = H, 4-MeO, 3-NO<sub>2</sub>) with a strong base, such as NaH or tert-BuOK in DMSO, gave the threo isomers in 90-98% yield.

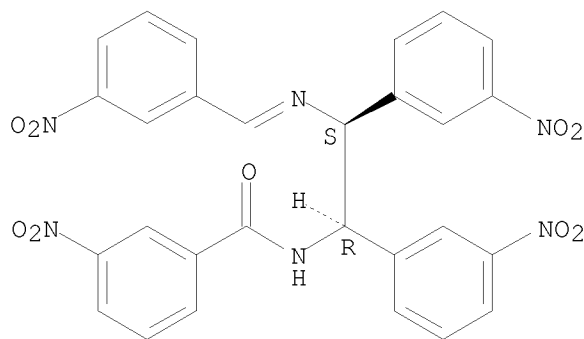
IT 872411-72-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (isomerization of erythro-N-aroyle-N'-arylidene derivs. of vicinal diamines)

RN 872411-72-8 CAPLUS

CN Benzamide, N-[(1R,2S)-1,2-bis(3-nitrophenyl)-2-[[3-nitrophenyl)methylene]amino]ethyl]-3-nitro-, rel- (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.



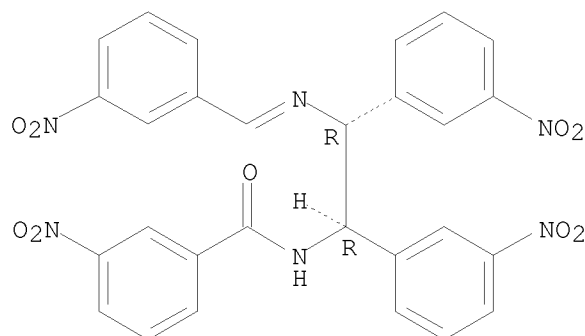
IT 872411-75-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (isomerization of erythro-N-aroyle-N'-arylidene derivs. of vicinal diamines)

RN 872411-75-1 CAPLUS

CN Benzamide, N-[(1R,2R)-1,2-bis(3-nitrophenyl)-2-[[3-nitrophenyl)methylene]amino]ethyl]-3-nitro-, rel- (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.



L4 ANSWER 9 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:283871 CAPLUS

DOCUMENT NUMBER: 142:481559

TITLE: Transfer Hydrogenation of Activated C:C Bonds  
Catalyzed by Ruthenium Amido Complexes: Reaction  
Scope, Limitation, and Enantioselectivity

AUTHOR(S): Xue, Dong; Chen, Ying-Chun; Cui, Xin; Wang, Qi-Wei;  
Zhu, Jin; Deng, Jin-Gen

CORPORATE SOURCE: Key Laboratory of Asymmetric Synthesis &  
Chirotechnology of Sichuan Province and Union  
Laboratory of Asymmetric Synthesis, Chengdu Institute  
of Organic Chemistry, Chinese Academy of Sciences,  
Chengdu, 610041, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2005), 70(9), 3584-3591  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:481559

AB It was found that the chemoselectivity could be completely switched from C:O to C:C bonds in the transfer hydrogenation of activated  $\alpha,\beta$ -unsatd. ketones  $R_1CH:CR_2COR_3$  ( $R_1$  = Ph, 4-MeOC<sub>6</sub>H<sub>4</sub>, 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>;  $R_2$  = H, Me, MeCO, EtO<sub>2</sub>C;  $R_3$  = Me, Ph) catalyzed by diamine-ruthenium complex. Moreover, this addition via metal hydride had been applied to the reduction of various activated olefins  $R_4R_5C:CR_6R_7$  ( $R_4$  = H, Me;  $R_5$  = H, n-C<sub>5</sub>H<sub>11</sub>, Ph, 4-MeOC<sub>6</sub>H<sub>4</sub>, 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>;  $R_6$  = CN, EtO<sub>2</sub>C, Ph, O<sub>2</sub>N, etc.;  $R_7$  = H, CN, O<sub>2</sub>N, HO<sub>2</sub>C, etc.). The electron-withdrawing ability of functional groups substituted on C:C bonds at the  $\alpha$ - or  $\beta$ -position had strong influence on the reactivity. In addition, a wide variety of chiral diamine-Ru(II)(arene) systems was investigated to explore the asym. transfer hydrogenation of prochiral  $\alpha,\alpha$ -dicyanoolefins. Two parameters had been systematically studied: (i) the structure of the N-sulfonylated chiral diamine ligands and (ii) the structure of the metal precursors.

IT 852212-93-2P 852212-94-3P 852212-95-4P

852212-96-5P

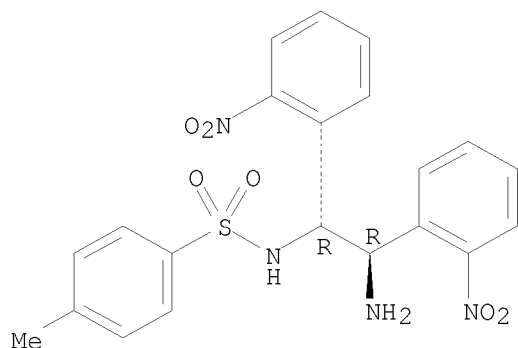
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)

(enantioselective and chemoselective ruthenium-catalyzed transfer hydrogenation of C:C bonds in  $\alpha,\beta$ -unsatd. ketones and activated alkenes using sulfonylated vicinal diamines as chiral ligands)

RN 852212-93-2 CAPLUS

CN Benzenesulfonamide, N-[(1R,2R)-2-amino-1,2-bis(2-nitrophenyl)ethyl]-4-methyl- (CA INDEX NAME)

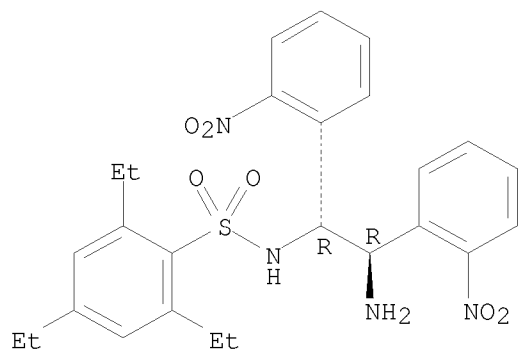
Absolute stereochemistry. Rotation (+).



RN 852212-94-3 CAPLUS

CN Benzenesulfonamide, N-[(1R,2R)-2-amino-1,2-bis(2-nitrophenyl)ethyl]-2,4,6-triethyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

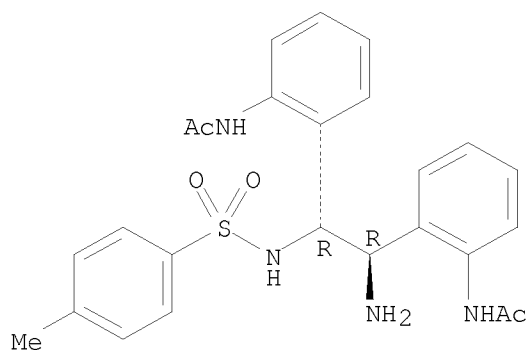


RN 852212-95-4 CAPLUS

CN Acetamide, N,N'-[[ (1R,2R)-1-amino-2-[[ (4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis- (9CI) (CA INDEX NAME)

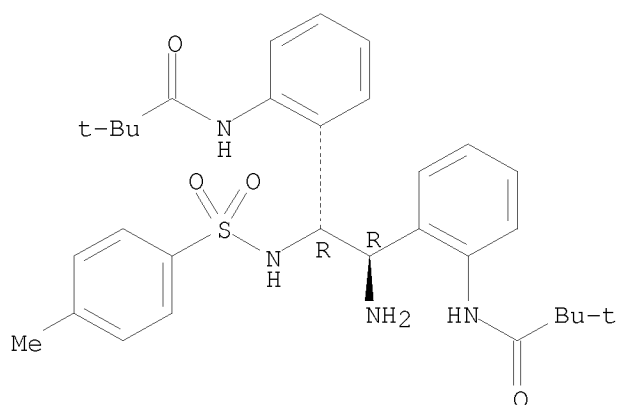
Absolute stereochemistry. Rotation (+).





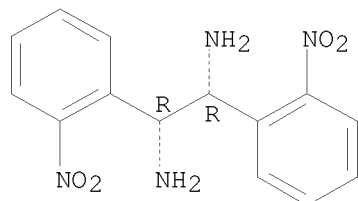
RN 852212-96-5 CAPLUS  
 CN Propanamide, N,N'-[[ (1R,2R)-1-amino-2-[[ (4-methylphenyl)sulfonyl]amino]-1,2-ethanediyl]di-2,1-phenylene]bis[2,2-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 852213-01-5 852213-02-6 852213-03-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (enantioselective and chemoselective ruthenium-catalyzed transfer  
 hydrogenation of C:C bonds in  $\alpha,\beta$ -unsatd. ketones and  
 activated alkenes using sulfonylated vicinal diamines as chiral  
 ligands)  
 RN 852213-01-5 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(2-nitrophenyl)-, (1R,2R)- (CA INDEX NAME)

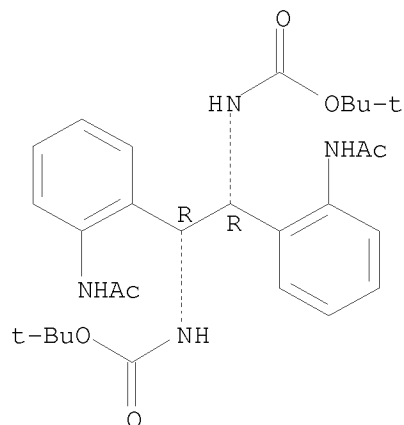
Absolute stereochemistry.



RN 852213-02-6 CAPLUS

CN Carbamic acid, [(1R,2R)-1,2-bis[2-(acetamino)phenyl]-1,2-ethanediyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

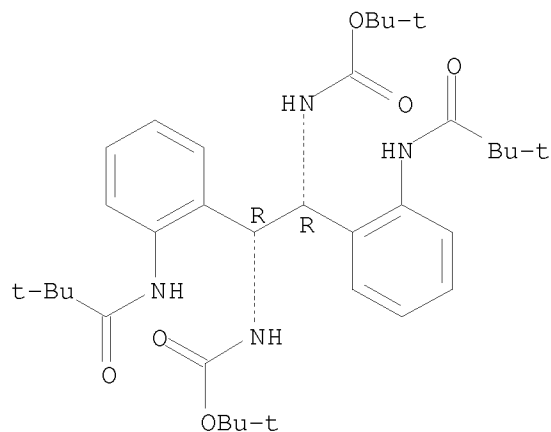
Absolute stereochemistry.



RN 852213-03-7 CAPLUS

CN Carbamic acid, [(1R,2R)-1,2-bis[2-[(2,2-dimethyl-1-oxopropyl)amino]phenyl]-1,2-ethanediyl]bis-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

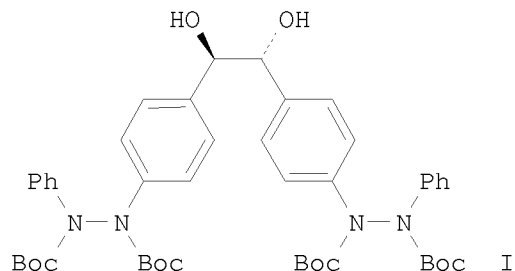
ACCESSION NUMBER: 2004:1062624 CAPLUS

DOCUMENT NUMBER: 142:155606

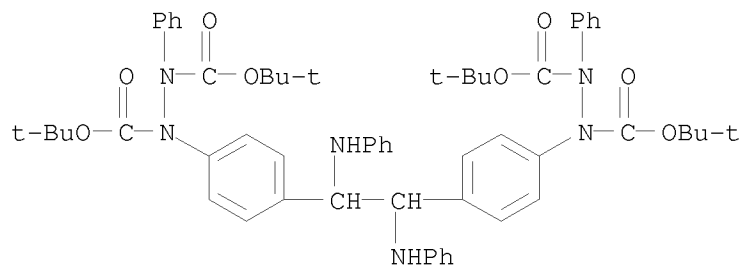
TITLE: Cu-Catalyzed N-arylation of hydrazines with bismuthanes: Synthesis and pinacol or imino-pinacol coupling of 4-formylphenylhydrazines and their phenylimine derivatives

AUTHOR(S): Loog, Olavi; Maeorg, Uno

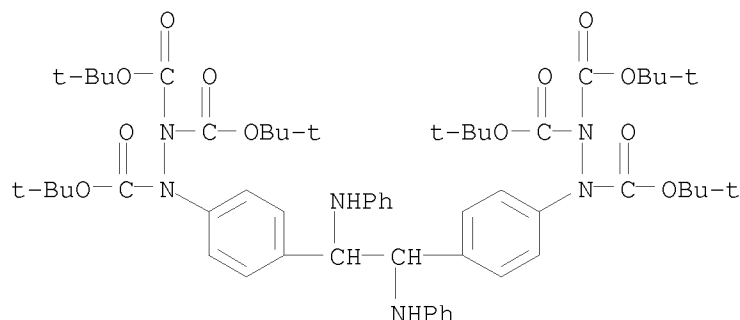
CORPORATE SOURCE: Institute of Organic and Bioorganic Chemistry,  
University of Tartu, Tartu, 51014, Estonia  
SOURCE: Synlett (2004), (14), 2537-2540  
CODEN: SYNLES; ISSN: 0936-5214  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 142:155606  
GI



AB Acetal protected 4-formylphenylbismuthane was prepared and used for  
arylation of trisubstituted hydrazines. Formylphenylhydrazines, obtained  
after removal of acetal group, were used in coupling reaction to give  
diols, e.g., I, containing two substituted hydrazino moieties and the coupling  
of corresponding phenylimine derivs. gave corresponding diamines.  
IT 828247-08-1P 828247-09-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of diarylethyldiamines via pinacol coupling of  
hydrazinobenzylidene anilines)  
RN 828247-08-1 CAPLUS  
CN 1,2-Hydrazinedicarboxylic acid, 1,1'-[[1,2-bis(phenylamino)-1,2-  
ethanediyl]di-4,1-phenylene]bis[2-phenyl-, tetrakis(1,1-dimethylethyl)  
ester (9CI) (CA INDEX NAME)



RN 828247-09-2 CAPLUS  
CN Hydrazinetricarboxylic acid, 2,2'-[[1,2-bis(phenylamino)-1,2-ethanediyl]di-  
4,1-phenylene]bis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX  
NAME)



REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:729357 CAPLUS

DOCUMENT NUMBER: 141:380216

TITLE: Titanocene-Catalyzed Coupling of Aromatic Amides in the Presence of Organosilanes: A Novel Route to Vicinal Diamines and a New Class of Amine-Substituted Oligomers

AUTHOR(S): Rangareddy, Kesamreddy; Selvakumar, Kumaravel; Harrod, John. F.

CORPORATE SOURCE: Chemistry Department, McGill University, Montreal, QC, H3A 2K6, Can.

SOURCE: Journal of Organic Chemistry (2004), 69(20), 6843-6850  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:380216

AB The title reaction has been surveyed for a number of substrates with differing substitution patterns. With a few exceptions, the methodol. provides a one-pot synthesis of the 1,2-diamines from widely available and inexpensive starting materials, and in high yields. In addition, the coupling of 1,4- and 1,3-bis-(N,N,N',N'-tetraalkyl)arylenediamides is shown, under the same exptl. conditions, to yield oligomers:  $R_2NC(O)C_6H_4CH(NR_2)-[CH(NR_2)C_6H_4CH(NR_2)]_n-CH(NR_2)C_6H_4C(O)-NR_2$  (R = Me and ethyl; n = 0 to ca. 5). The chemical structures of these unprecedented oligomers are determined by comparison of NMR and MS spectra to those of vicinal diamines, prepared from the analogous N,N-dialkylbenzamides. The origin of the limitation of oligomer chain length is probably due to a specific effect of the internal benzylic amine group, since the substrate 4-Me<sub>2</sub>NCH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>C(O)NMe<sub>2</sub> was found to be uniquely unreactive compared to the other 4-substituted N,N-dialkylbenzamides investigated. N-Methylphthalimide was briefly studied as a monomer and anal. by MS showed that oligomers are formed. Attempts to fully characterize these polymers were unsuccessful.

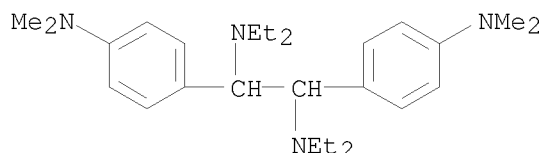
IT 784146-42-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(titanocene-catalyzed coupling of aromatic amides in the presence of organosilanes)

RN 784146-42-5 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetraethyl-

(9CI) (CA INDEX NAME)



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:491041 CAPLUS

DOCUMENT NUMBER: 139:69261

TITLE: Preparation of cis-2,4,5-triphenylimidazolines as MDM2 inhibitors

INVENTOR(S): Kong, Norman; Liu, Emily Aijun; Vu, Binh Thanh

PATENT ASSIGNEE(S): F. Hoffmann-La Roche Ag, Switz.

SOURCE: PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

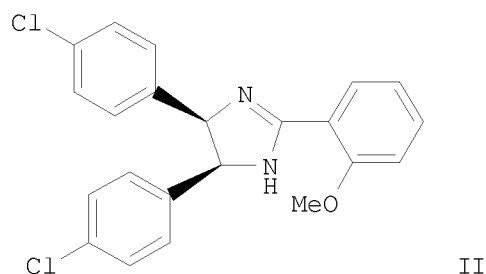
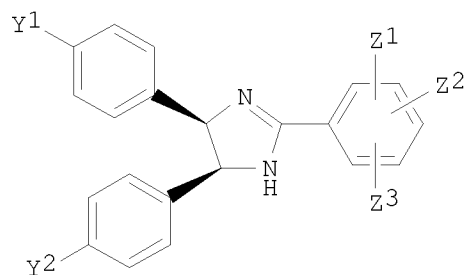
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051360	A1	20030626	WO 2002-EP13905	20021209
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2468783	A1	20030626	CA 2002-2468783	20021209
AU 2002361986	A1	20030630	AU 2002-361986	20021209
AU 2002361986	B2	20080410		
EP 1463501	A1	20041006	EP 2002-796582	20021209
EP 1463501	B1	20080611		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
BR 2002015156	A	20041019	BR 2002-15156	20021209
CN 1604778	A	20050406	CN 2002-825229	20021209
JP 2005515210	T	20050526	JP 2003-552293	20021209
RU 2312101	C2	20071210	RU 2004-122404	20021209
AT 397925	T	20080715	AT 2002-796582	20021209
ES 2307822	T3	20081201	ES 2002-796582	20021209
US 6617346	B1	20030909	US 2002-316696	20021211
MX 2004PA05880	A	20040913	MX 2004-PA5880	20040616
PRIORITY APPLN. INFO.:			US 2001-341729P	P 20011218

US 2002-390876P  
WO 2002-EP13905

P 20020621  
W 20021209

OTHER SOURCE(S): MARPAT 139:69261  
GI



AB Title compds. I [Z1-3 = alkoxy, alkylloxy, etc.; Y1-2 = Cl, Br, NO<sub>2</sub>, C:N, etc.] are prepared For instance, 2-methoxybenzonitrile is converted to the corresponding Et benzimidate (EtOH, HCl, 0°) and reacted with meso-1,2-bis(4-chlorophenyl)ethane-1,2-diamine to give II. I inhibit the interaction of MDM2 protein with a p53-like peptide and have antiproliferative activity.

IT 117903-52-3

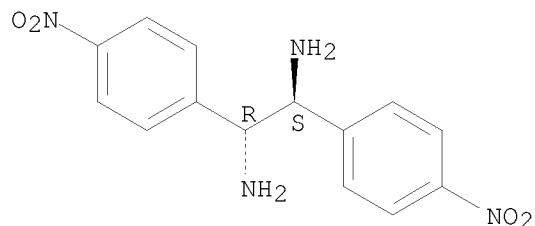
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of cis-2,4,5-triphenylimidazolines that inhibit the interaction of MDM2 protein with a p53-like peptide)

RN 117903-52-3 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, (1R,2S)-rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:177302 CAPLUS

DOCUMENT NUMBER: 135:33360

TITLE: Reductive coupling of aromatic oximes and azines to 1,2-diamines using Zn-MsOH or Zn-TiCl<sub>4</sub>

AUTHOR(S): Kise, N.; Ueda, N.

CORPORATE SOURCE: Faculty of Engineering, Department of Biotechnology, Tottori University, Koyama, Tottori, 680-8552, Japan

SOURCE: Tetrahedron Letters (2001), 42(12), 2365-2368

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:33360

AB The reduction of aromatic aldoximes and azines with Zn in the presence of MeSO<sub>3</sub>H

(MsOH) or TiCl<sub>4</sub> afforded N,N'-unsubstituted 1,2-diamines in a single step. The reductive coupling with Zn-MsOH gave meso 1,2-diamines selectively, whereas dl 1,2-diamines were formed selectively by reduction with Zn-TiCl<sub>4</sub>.

IT 58519-88-3P 221233-31-4P

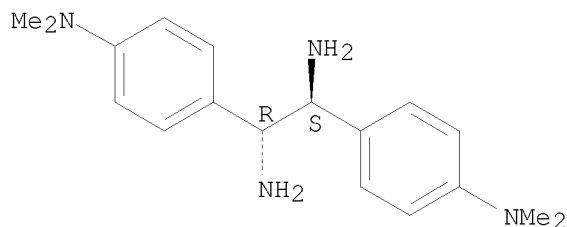
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of 1,2-diamines by reductive coupling of aromatic oximes and azines using zinc/methanesulfonate or zinc/titanium chloride)

RN 58519-88-3 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2S)-rel- (CA INDEX NAME)

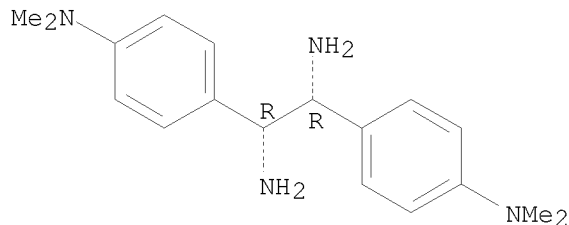
Relative stereochemistry.



RN 221233-31-4 CAPLUS

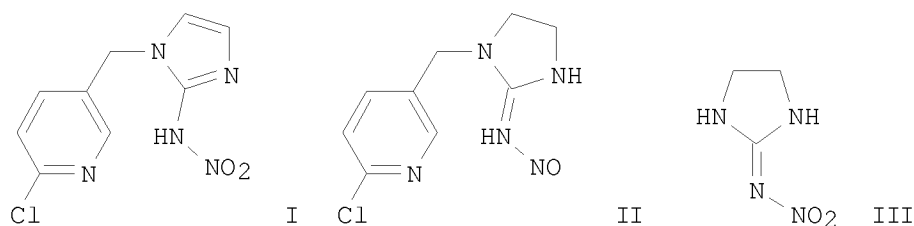
CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2R)-rel- (CA INDEX NAME)

Relative stereochemistry.



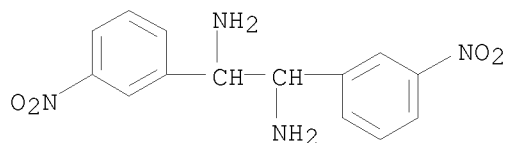
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:77780 CAPLUS  
 DOCUMENT NUMBER: 134:237427  
 TITLE: Preparation of new imidacloprid analogs  
 AUTHOR(S): Novak, Lajos; Hornyanszky, Gabor; Kiraly, Imre;  
 Rohaly, Janos; Kolonits, Pal; Szantay, Csaba  
 CORPORATE SOURCE: Institute for Organic Chemistry, Budapest University  
 of Technology and Economics, Budapest, 1111, Hung.  
 SOURCE: Heterocycles (2001), 55(1), 45-58  
 CODEN: HTCYAM; ISSN: 0385-5414  
 PUBLISHER: Japan Institute of Heterocyclic Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 134:237427  
 GI



AB A 3-step synthesis of the biol. active metabolites, I and II, of imidacloprid from aminoacetaldehyde di-Et acetal or ethylenediamine was developed. Thus, reacting nitro imidazole III with H<sub>2</sub>/Raney Ni/DMF followed by addition of 2-chloro-5-(chloromethyl)pyridine gave imidacloprid. Treating the imidacloprid with H<sub>2</sub>/Raney Ni/EtOH gave II in 36% yield. A series of new imidacloprid analogs were also prepared

IT 110157-07-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of imidacloprid metabolites and analogs)  
 RN 110157-07-8 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)- (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1999:170605 CAPLUS



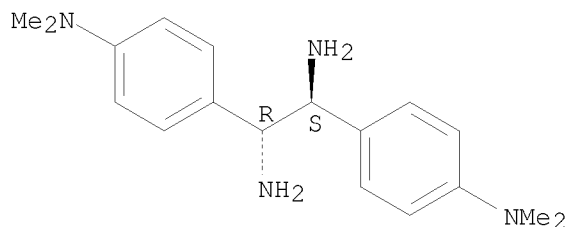
DOCUMENT NUMBER: 130:245670  
 TITLE: Diamine preparation for synthesis of a water soluble Ni(II) salen complex  
 AUTHOR(S): Shearer, Jason M.; Rokita, Steven E.  
 CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Maryland, College Park, MD, 20742-2021, USA  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (1999), 9(3), 501-504  
 CODEN: BMCLE8; ISSN: 0960-894X  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A reliable and efficient synthesis of a Ni(II) salen complex useful in probing nucleic acid structure is described and illustrates a general approach for constructing cis diamines suitable for assembly into N2O2 Schiff base complexes. Two equivalents of an aryllithium reacted with 1,4-dimethylpiperazine-2,3-dione to form the sym.  $\alpha$ -dione. This material was then converted to its dioxime and reduced by  $\text{TiCl}_4/\text{NaBH}_4$  to yield the meso-diamine. Condensation of the diamine and salicylaldehyde, coordination of Ni and final methylation generated the desired water soluble and redox active complex.

IT 58519-88-3P 221233-31-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (for preparation of nickel bis(salicylidene)bis(trimethylammoniohenyl)diaminoethane complex)

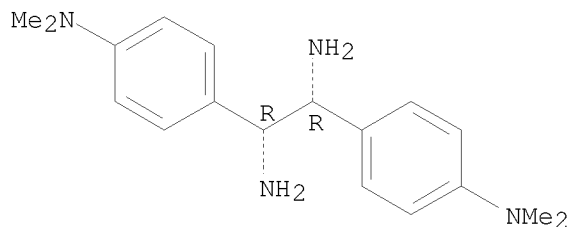
RN 58519-88-3 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2S)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 221233-31-4 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2R)-rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:520207 CAPLUS  
DOCUMENT NUMBER: 129:260295  
ORIGINAL REFERENCE NO.: 129:53049a,53052a  
TITLE: Reductive coupling of aldimines to vicinal diamines using Zn powder in aqueous basic media  
AUTHOR(S): Dutta, Manu P.; Baruah, Bipul; Boruah, Anima; Prajapati, Dipak; Sandhu, Jagir S.  
CORPORATE SOURCE: Regional Research Laboratory, Jorhat, 785006, India  
SOURCE: Synlett (1998), (8), 857-858  
CODEN: SYNLES; ISSN: 0936-5214  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 129:260295

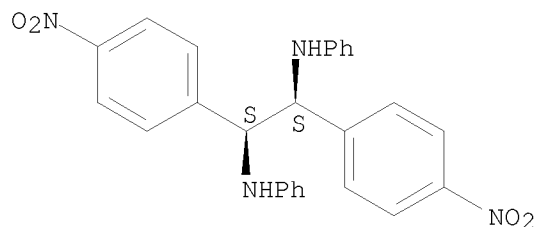
AB Reductive coupling of aldimines into vicinal diamines has been performed by the action of zinc powder and 10% sodium hydroxide solution without using any organic solvents at ambient temperature in high yields.

IT 213407-24-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of vicinal diamines by reductive coupling of aldimines)

RN 213407-24-0 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-diphenyl-, (1R,2R)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 17 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:453649 CAPLUS  
DOCUMENT NUMBER: 129:175629  
ORIGINAL REFERENCE NO.: 129:35697a,35700a  
TITLE: Reaction of 3,4-diformyl-2,5-dimethylpyrrole with 1,2-(substituted)diphenyl-1,2-diaminoethanes  
AUTHOR(S): Ogretir, Cemil; Severcan, Fatma  
CORPORATE SOURCE: Chemistry Department, Faculty of Arts & Sciences, Osmangazi University, Eskisehir, 26020, Turk.  
SOURCE: Turkish Journal of Chemistry (1998), 22(2), 137-142  
CODEN: TJCHE3; ISSN: 1300-0527  
PUBLISHER: Scientific and Technical Research Council of Turkey  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB 3,4-Diformyl-2,5-dimethylpyrrole reacts with

1,2-diphenyl-1,2-diaminoethane derivs. to form potentially tautomeric 2:2 macrocyclic adducts. <sup>1</sup>H and <sup>13</sup>C NMR spectral data along with acidity measurements indicate that the 2-azafulvene structure is predominant for all adducts.

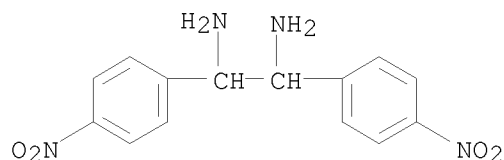
IT 93696-33-4P 110157-07-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(reaction of diformyldimethylpyrrole with diphenyldiaminoethanes)

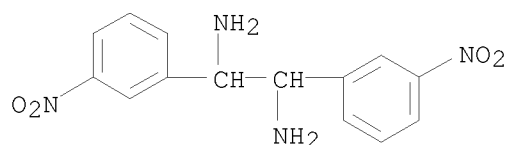
RN 93696-33-4 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)- (CA INDEX NAME)



RN 110157-07-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)- (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:275905 CAPLUS

DOCUMENT NUMBER: 128:294427

ORIGINAL REFERENCE NO.: 128:58351a

TITLE: Low Valent Titanium Mediated Imino-Pinacol Coupling: An Improved and Expeditious Route to Vicinal Diamino-Based Ligands

AUTHOR(S): Talukdar, Sanjay; Banerji, Asoke

CORPORATE SOURCE: Bio-Organic Division, Bhabha Atomic Research Centre, Mumbai, 400 085, India

SOURCE: Journal of Organic Chemistry (1998), 63(10), 3468-3470  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 128:294427

AB Reductive dimerization of aldimines R<sup>2</sup>CH:NR<sup>1</sup> [R<sup>1</sup> = Ph, 2-ClC<sub>6</sub>H<sub>4</sub>, PhCH<sub>2</sub>, cyclohexyl; R<sup>2</sup> = (un)substituted Ph] by low valent titanium reagent TiCl<sub>3</sub>-Li-THF gave diamines R<sup>1</sup>NHCHR<sup>2</sup>CHR<sup>2</sup>NHR<sup>1</sup>. On the other hand, similar treatment of ketimines resulted in reduction of the ketimine.

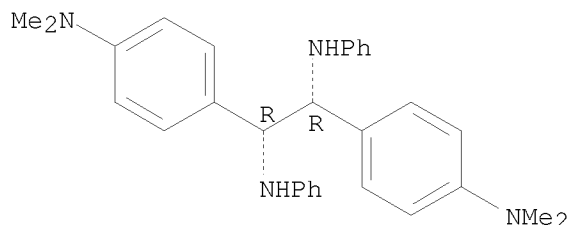
IT 189937-38-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of diamines by low valent titanium-mediated imino-pinacol

coupling)  
 RN 189937-38-0 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-diphenyl-,  
 (R\*,R\*)- (9CI) (CA INDEX NAME)

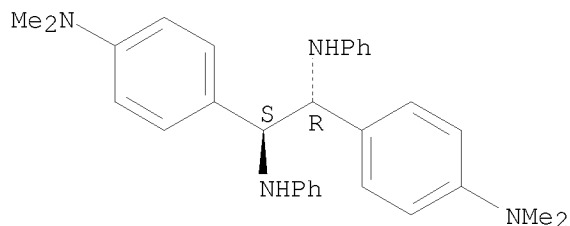
Relative stereochemistry.



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

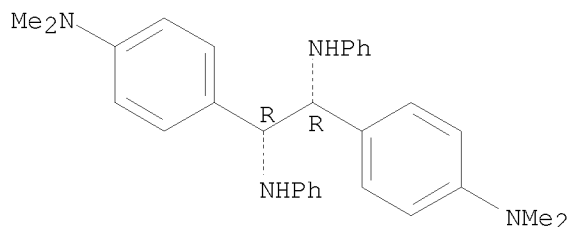
L4 ANSWER 19 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1997:255642 CAPLUS  
 DOCUMENT NUMBER: 126:343348  
 ORIGINAL REFERENCE NO.: 126:66773a,66776a  
 TITLE: Reductive coupling of aldimines mediated with samarium catalyzed by Cp2TiCl2  
 AUTHOR(S): Liao, Puhong; Huang, You; Zhang, Yongmin  
 CORPORATE SOURCE: Department of Chemistry, Hangzhou University, Hangzhou, 310028, Peop. Rep. China  
 SOURCE: Synthetic Communications (1997), 27(9), 1483-1486  
 CODEN: SYNCAV; ISSN: 0039-7911  
 PUBLISHER: Dekker  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 126:343348  
 AB Reductive coupling of aldimines into vicinal diamines mediated with samarium catalyzed by Cp2TiCl2 proceeds in refluxing THF with good yields.  
 IT 189937-37-9P 189937-38-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (reductive coupling of aldimines mediated with samarium catalyzed by Cp2TiCl2)  
 RN 189937-37-9 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-diphenyl-,  
 (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 189937-38-0 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-diphenyl-,  
 (R\*,R\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

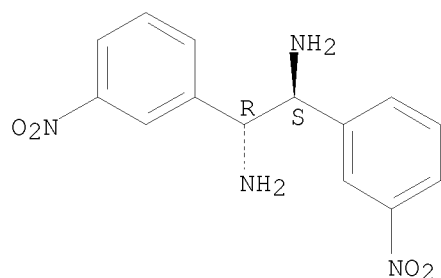
L4 ANSWER 20 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1996:247847 CAPLUS  
 DOCUMENT NUMBER: 125:10256  
 ORIGINAL REFERENCE NO.: 125:2265a,2268a  
 TITLE: Microwave oven reaction enhanced (MORE) preparation of  
 substituted stilbenediamines  
 AUTHOR(S): Lancashire, Robert J.; Reese, Paul B.  
 CORPORATE SOURCE: Dep. Chem., Univ. West Indies, Kingston, Jamaica  
 SOURCE: Electronic Conference on Trends in Organic Chemistry  
 [CD-ROM] (1996), Meeting Date 1995, Paper 57.  
 Editor(s): Rzepa, Henry S.; Leach, Christopher;  
 Goodman, Jonathan M. Royal Society of Chemistry:  
 Cambridge, UK.  
 CODEN: 62TKAB  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English

AB Transition metal complexes formed from stilbenediamines have been of  
 interest for some time. From the early work on the unusual solvent  
 effects on the nickel complexes known as Lifschitz's salts to more recent  
 studies where manganese complexes have been utilized in the chiral  
 epoxidn. of alkenes. In an effort to shorten the preparation time of the  
 compds., the condensation of benzaldehyde with ammonium acetate has been  
 re-examined under microwave conditions. Thus, reaction of benzaldehyde and  
 ammonium acetate in a Teflon bomb under microwave irradiation for 3 min gave  
 56% adduct meso-BzNHCHPhCHPhN:CHPh, which was hydrolyzed with 50% H2SO4 to  
 give 24% meso-H2NCHPhCHPhNH2.

IT 91044-21-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (microwave-enhanced condensation of aromatic aldehydes with ammonium  
 acetate in preparation of substituted stilbenediamines)

RN 91044-21-2 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)-, (R\*,S\*)- (9CI) (CA INDEX  
 NAME)

Relative stereochemistry.



L4 ANSWER 21 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:259086 CAPLUS

DOCUMENT NUMBER: 122:105134

ORIGINAL REFERENCE NO.: 122:19779a,19782a

TITLE: Infrared spectra of aromatic Schiff base electron transfer products

AUTHOR(S): Juchnovski, I. N.; Ognyanova, V.; Andreev, G. N.

CORPORATE SOURCE: Inst. Org. Chem., Bulgarian Acad. Sci., Sofia, 1113, Bulg.

SOURCE: Spectroscopy Letters (1994), 27(10), 1299-307

CODEN: SPLEBX; ISSN: 0038-7010

PUBLISHER: Dekker

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The electron transfer products of aromatic Schiff bases generated by reaction with alkali naphthalenides and electrochem. have been investigated by means of IR spectroscopic technique. On the basis of the assigned nitrile group band frequencies and intensities in the measured IR spectra, the anion radicals, dianions and carbanions of the compds. under investigation have been identified.

IT 160563-42-8 160563-43-9 160563-49-5

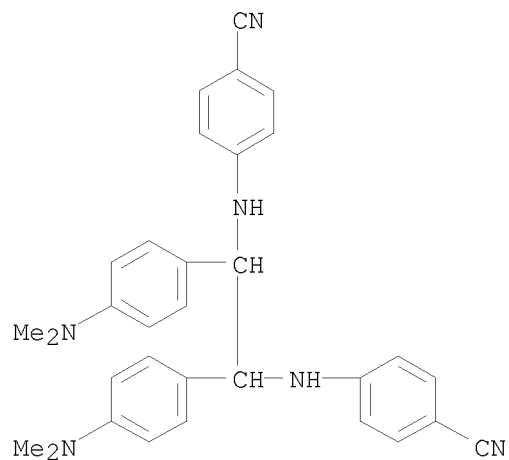
160563-82-6

RL: PRP (Properties)

(IR of aromatic Schiff base electron transfer products)

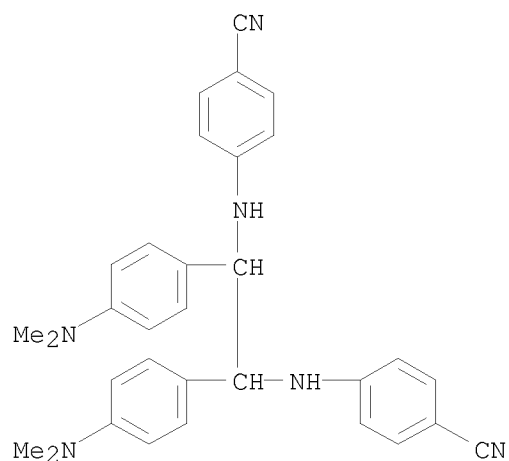
RN 160563-42-8 CAPLUS

CN Benzonitrile, 4,4'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]diimino]bis-, dipotassium salt (9CI) (CA INDEX NAME)



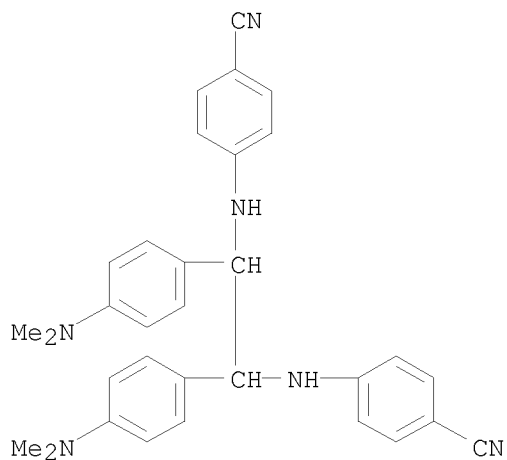
● 2 K

RN 160563-43-9 CAPLUS  
 CN Benzonitrile, 4,4'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]diimino]bis-, disodium salt (9CI) (CA INDEX NAME)



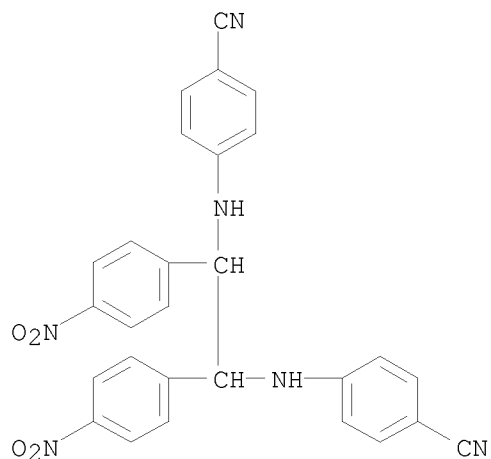
● 2 Na

RN 160563-49-5 CAPLUS  
 CN Benzonitrile, 4,4'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]diimino]bis-, dilithium salt (9CI) (CA INDEX NAME)



●2 Li

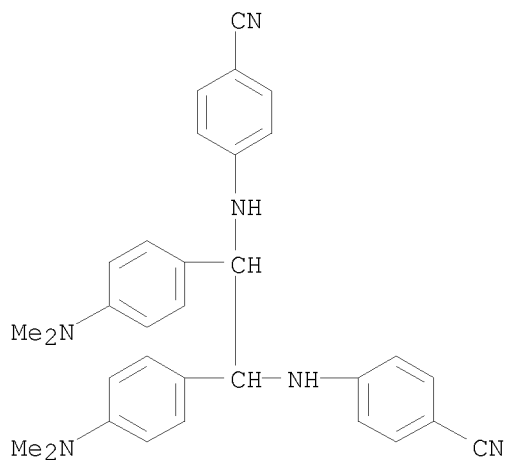
RN 160563-82-6 CAPLUS  
 CN Benzonitrile, 4,4'-[[1,2-bis(4-nitrophenyl)-1,2-ethanediyl]diimino]bis-,  
 dipotassium salt (9CI) (CA INDEX NAME)



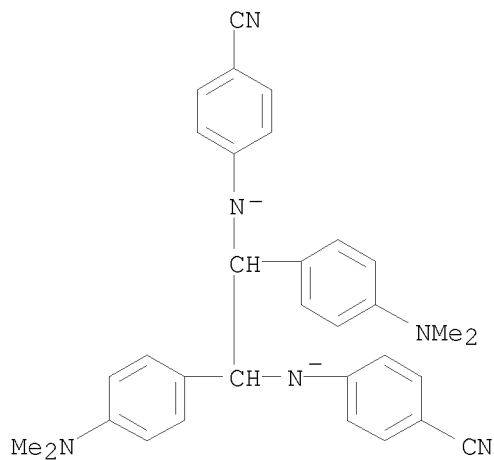
●2 K

IT 160563-43-9  
 RL: PRP (Properties)  
 (autoxidative; IR of aromatic Schiff base electron transfer products)  
 RN 160563-43-9 CAPLUS  
 CN Benzonitrile, 4,4'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]diimino]bis-, disodium salt (9CI) (CA INDEX NAME)





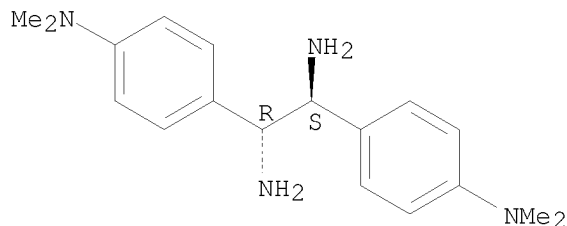
IT 160563-44-0P  
 RL: PNU (Preparation, unclassified); PREP (Preparation)  
 (autoxidative; formation from aromatic Schiff base electron transfer  
 products)  
 RN 160563-44-0 CAPLUS  
 CN Benzonitrile, 4,4'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-  
 ethanediyl]diimino]bis-, ion(2-) (9CI) (CA INDEX NAME)



L4 ANSWER 22 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1995:250101 CAPLUS  
 DOCUMENT NUMBER: 122:48840  
 ORIGINAL REFERENCE NO.: 122:9293a,9296a  
 TITLE: DNA modification promoted by water-soluble nickel(II)  
 salen complexes: a switch to DNA alkylation

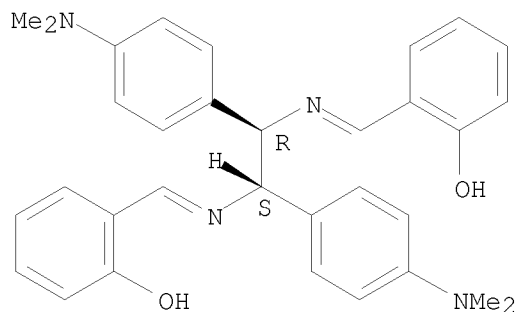
AUTHOR(S): Muller, James G.; Paikoff, Sari J.; Rokita, Steven E.; Burrows, Cynthia J.  
 CORPORATE SOURCE: Dep. Chem., State Univ. New York, Stony Brook, Stony Brook, NY, USA  
 SOURCE: Journal of Inorganic Biochemistry (1994), 54(3), 199-206  
 CODEN: JIBIDJ; ISSN: 0162-0134  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Reaction of a 17-base hairpin-forming oligonucleotide with [N,N'-bis(salicylaldehyde)-meso-1,2-bis(4-trimethylaminophenyl)ethylenediimino]nickel(II) perchlorate and KHSO5 produced two types of high mol. weight products, an alkaline-labile species and a nonalkaline-labile species, which co-migrated on gel electrophoresis. Upon treatment with piperidine, the base-labile derivative led to strand scission products only at accessible guanine residues that were not part of a Watson-Crick duplex. The formation of higher mol. weight species is proposed to occur via a highly reactive ligand-centered radical acting as a DNA alkylating agent.  
 IT 58519-88-3 58520-39-1  
 RL: RCT (Reactant); RACT (Reactant or reagent) (nickel(II) complexes synthetic procedure)  
 RN 58519-88-3 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2S)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 58520-39-1 CAPLUS  
 CN Phenol, 2,2'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]bis(nitrilomethylidyne)]bis-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.



L4 ANSWER 23 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1992:407579 CAPLUS

DOCUMENT NUMBER: 117:7579

ORIGINAL REFERENCE NO.: 117:1535a,1538a

TITLE: 1,2-Diphenyl-1,2-diaminoethane derivatives as scissors shaped allosteric receptors

AUTHOR(S): Schneider, Hans Joerg; Werner, Frank

CORPORATE SOURCE: FR Org. Chem., Univ. Saarlandes, Saarbruecken, W-6600/11, Germany

SOURCE: Journal of the Chemical Society, Chemical Communications (1992), (6), 490-1  
CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The binding of transition metal ions at one side of a simple mol. hinge, 4-(Me<sub>3</sub>N<sup>+</sup>)C<sub>6</sub>H<sub>4</sub>CH(NH<sub>2</sub>)CH(NH<sub>2</sub>)C<sub>6</sub>H<sub>4</sub>(N<sup>+</sup>Me<sub>3</sub>)-4, induces geometric displacements of electrostatic binding sites at the other side and thus liberation of dianionic substrates, e.g., C<sub>6</sub>H<sub>4</sub>(CO<sub>2</sub><sup>-</sup>)<sub>2</sub>-1,4.

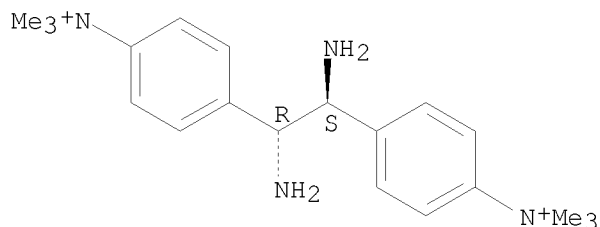
IT 141873-48-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and inclusion reaction and binding affinity of, for aromatic dianions)

RN 141873-48-5 CAPLUS

CN Benzenaminium, 4,4'-(1,2-diamino-1,2-ethanediyl)bis[N,N,N-trimethyl-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

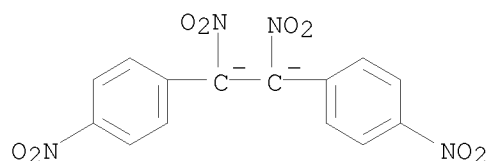


L4 ANSWER 24 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1989:406783 CAPLUS

DOCUMENT NUMBER: 111:6783

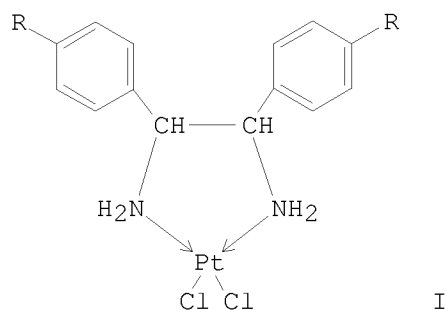
ORIGINAL REFERENCE NO.: 111:1299a,1302a  
 TITLE: Geometric structure and excited states of anions of nitro compounds  
 AUTHOR(S): Chuvashov, D. D.; Ratovskii, G. V.; Lipina, E. S.; Pozdnyakov, V. P.  
 CORPORATE SOURCE: Irkutsk. Gos. Univ., Irkutsk, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1988), 58(11), 2544-53  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB MNDO calcns. showed that the geometry of the C:NO<sub>2</sub><sup>-</sup> fragment in nonconjugated and conjugated mono- and dianions of nitro compds. is approx. constant; the conjugated anions are nearly planar if no steric hindrance is present. CNDO/S calcns. indicated that the long-wavelength electronic-spectral band of the mono- and dianions was of the  $\pi, \pi^*$  type. Conjugation of the nitro group with an unsatd. fragment led to low-energy electronic transitions and an appreciable bathochromic shift of the long-wavelength band. These transitions were accompanied by redistribution of the electron d. within the C:NO<sub>2</sub><sup>-</sup> group or partial charge transfer to the unsatd. fragment.  
 IT 120983-54-2  
 RL: PRP (Properties)  
 (electronic spectrum of)  
 RN 120983-54-2 CAPLUS  
 CN Benzene, 1,1'-(1,2-dinitro-1,2-ethanediyl)bis[4-nitro-, ion(2-), disodium (9CI) (CA INDEX NAME)



●2 Na<sup>+</sup>

L4 ANSWER 25 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1989:18094 CAPLUS  
 DOCUMENT NUMBER: 110:18094  
 ORIGINAL REFERENCE NO.: 110:2969a,2972a  
 TITLE: Influence of ring substituents on the antitumor effect of dichloro(1,2-diphenylethylenediamine)platinum(II) complexes  
 AUTHOR(S): Jennerwein, Margaretha; Wappes, Beate; Gust, Ronald; Schoenenburger, Helmut; Engel, Juergen; Seeber, Siegfried; Osieka, Reinhardt  
 CORPORATE SOURCE: Inst. Pharm., Regensburg, D-8400, Fed. Rep. Ger.  
 SOURCE: Journal of Cancer Research and Clinical Oncology (1988), 114(4), 347-58  
 CODEN: JCROD7; ISSN: 0171-5216  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

GI



AB Diastereomeric para-substituted dichloro-(1,2-diphenylethylenediamine)platinum(II) complexes (I, R = H, OH, OMe, Me, Cl, F, NO<sub>2</sub>, CN, Br, CF<sub>3</sub> or NMe<sub>2</sub>) were synthesized and tested for their antitumor activity on the human MDA-MB 231 breast cancer cell line and the P 388 leukemia of the mouse. An interaction with the DNA was demonstrated by UV difference spectroscopy. The 4-fluoro-substituted complex with DL-configuration was the most active.

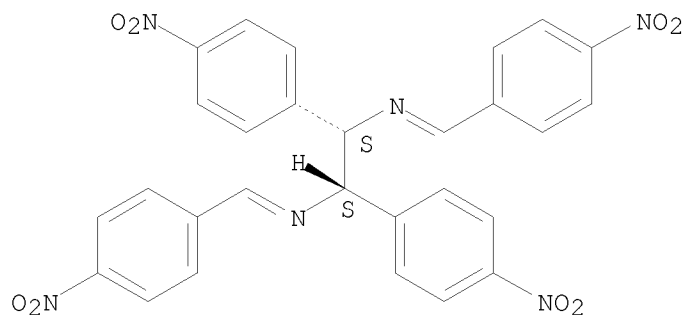
IT 117903-68-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and acidic hydrolysis of)

RN 117903-68-1 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-bis[(4-nitrophenyl)methylene]-, (R\*,R\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.



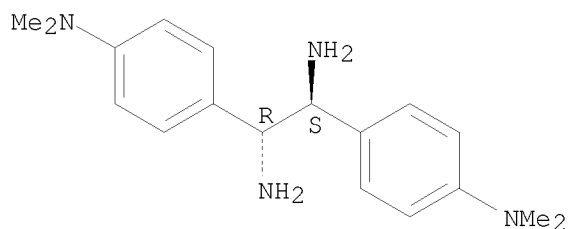
IT 58519-88-3P 58520-02-8P 117903-52-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and complexation of, with tetrachloroplatinate)

RN 58519-88-3 CAPLUS

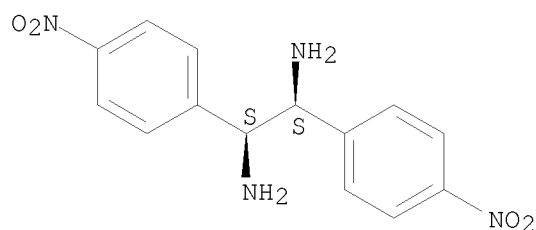
CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2S)-rel- (CA INDEX NAME)

Relative stereochemistry.



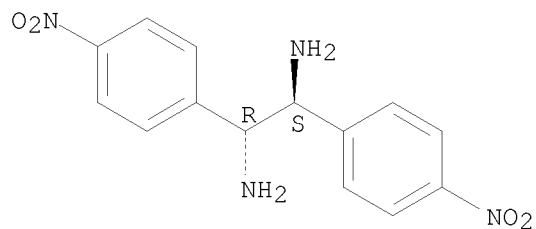
RN 58520-02-8 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, (R\*,R\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



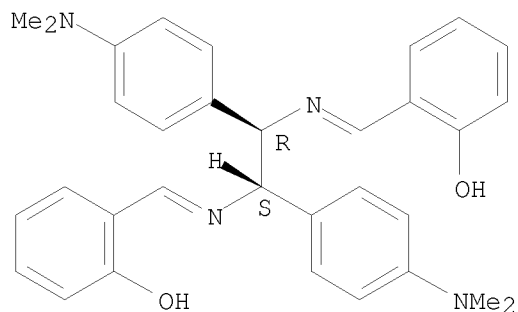
RN 117903-52-3 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, (1R,2S)-rel- (CA INDEX NAME)

Relative stereochemistry.



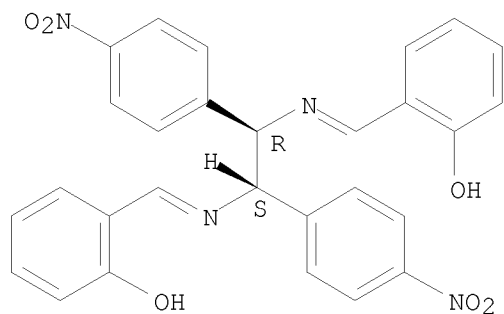
IT 58520-39-1P 117903-62-5P 117903-64-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and isomerization of)  
 RN 58520-39-1 CAPLUS  
 CN Phenol, 2,2'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]bis(nitrilomethylidyne)]bis-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.



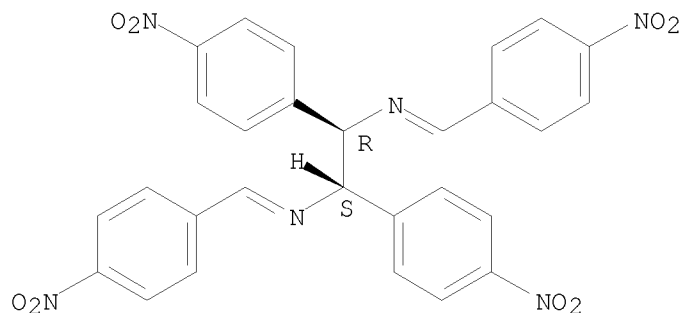
RN 117903-62-5 CAPLUS  
 CN Phenol, 2,2'-[[1,2-bis(4-nitrophenyl)-1,2-ethanediyl]bis(nitrilomethylidene)]bis-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry unknown.



RN 117903-64-7 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-bis[(4-nitrophenyl)methylene]-, (R\*,S\*)- (9CI) (CA INDEX NAME)

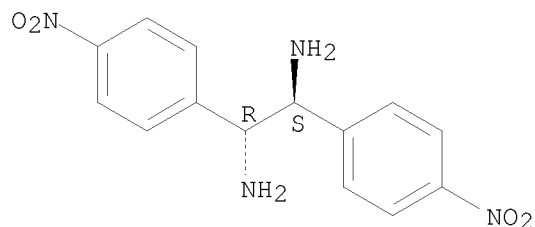
Relative stereochemistry.  
 Double bond geometry unknown.



IT 117903-77-2P 117903-79-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 117903-77-2 CAPLUS  
CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, dihydrochloride, (R\*,S\*)-  
(9CI) (CA INDEX NAME)

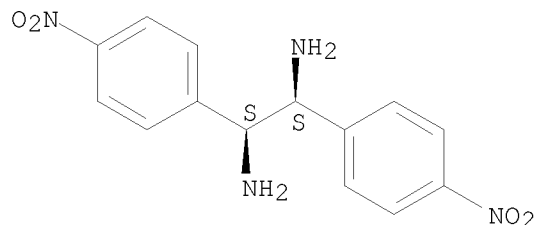
Relative stereochemistry.



● 2 HCl

RN 117903-79-4 CAPLUS  
CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, dihydrochloride, (R\*,R\*)-  
(9CI) (CA INDEX NAME)

Relative stereochemistry.



● 2 HCl

L4 ANSWER 26 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1988:492367 CAPLUS  
DOCUMENT NUMBER: 109:92367  
ORIGINAL REFERENCE NO.: 109:15397a,15400a  
TITLE: Preparation of 1,2-diarylethylenediamines by aminative  
reductive coupling of aromatic aldehydes with  
low-valent titanium reagents  
AUTHOR(S): Betschart, Claudia; Seebach, Dieter  
CORPORATE SOURCE: Lab. Org. Chem., Eidg. Tech. Hochsch., Zurich,  
CH-8092, Switz.  
SOURCE: Helvetica Chimica Acta (1987), 70(8), 2215-31  
CODEN: HCACAV; ISSN: 0018-019X  
DOCUMENT TYPE: Journal  
LANGUAGE: German  
OTHER SOURCE(S): CASREACT 109:92367  
AB In a novel McMurry-type one-pot reaction, RCHO (R = Ph, substituted Ph,



naphthyl, 2-furyl, 2-thienyl, 2-pyridyl) and  $R_1R_2NH$  ( $R_1 = R_2 = \text{Me, Et}$ ;  $NR_1R_2 = \text{pyrrolidino, piperidino, NMePh}$ ) are coupled to give the  $R_1R_2NCH_2RCH_2CNR_1R_2$ . To this end,  $LiNR_1R_2$  is added to  $RCHO$  to give the adduct which is then treated with 1 equivalent of  $TiCl_4$  to yield a colored suspension of a reagent synthetically equivalent to a iminium salt. After treatment with a low-valent Ti reagent which is prepared by reduction of  $TiCl_4$  with either K or, preferably, Mg  $R_1R_2NCH_2RCH_2NR_1R_2$  are isolated in 23 to 81% yield as a 1:1 mixture of the (meso- and rac-forms). These are separated either by chromatog. or by crystallization and characterized.

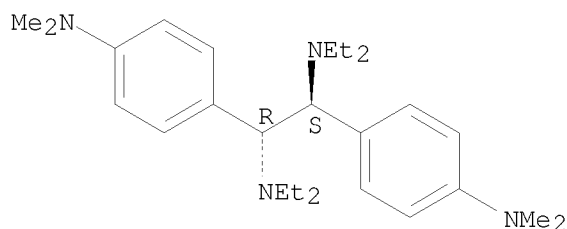
IT 115877-07-1P 115877-08-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 115877-07-1 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetraethyl-,  
(R\*,S\*)- (9CI) (CA INDEX NAME)

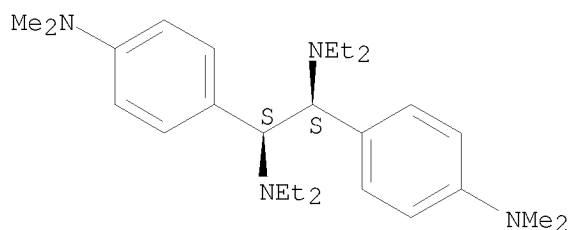
Relative stereochemistry.



RN 115877-08-2 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N,N',N'-tetraethyl-,  
(R\*,R\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 27 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1985:203672 CAPLUS

DOCUMENT NUMBER: 102:203672

ORIGINAL REFERENCE NO.: 102:31917a,31920a

TITLE: 1,2-Diarylethylenediamines. A preparation via  
trisubstituted 2-imidazolines and conversion to some  
new stilbenediamine tetraacetic acids

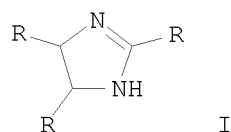
AUTHOR(S): Zupanc, S.; Karaman, B.; Jakopcic, K.

CORPORATE SOURCE: Fac. Technol., Univ. Zagreb, Zagreb, 41000, Yugoslavia

SOURCE: Glasnik Hemicara i Tehnologa Bosne i Hercegovine  
(1983), Volume Date 1980-1981, 27-28, 71-80

CODEN: GHTBAB; ISSN: 0367-4444

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 102:203672  
 GI



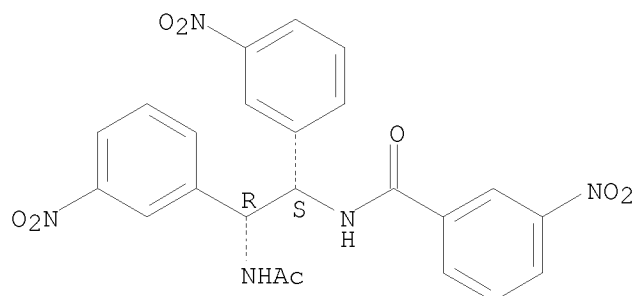
AB meso- And (±)-(HO<sub>2</sub>CCH<sub>2</sub>)<sub>2</sub>NCHRCHR(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub> [R = (un)substituted Ph] were prepared by acetylation and acidic cleavage of triarylimidazolines I, hydrolysis of the N-acyl groups to give H<sub>2</sub>NCHRCHRNH<sub>2</sub>, and by alkylation with ClCH<sub>2</sub>CO<sub>2</sub>Na. I (R = 2-furanyl) was cleaved by R<sub>1</sub>COCl (R = Me, Ph, furanyl, EtO) to give R<sub>1</sub>CONHCHRCHRNHCOR (R = 2-furanyl).

IT 91044-11-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and acid hydrolysis of)

RN 91044-11-0 CAPLUS

CN Benzamide, N-[(1R,2S)-2-(acetylamino)-1,2-bis(3-nitrophenyl)ethyl]-3-nitro-, rel- (CA INDEX NAME)

Relative stereochemistry.

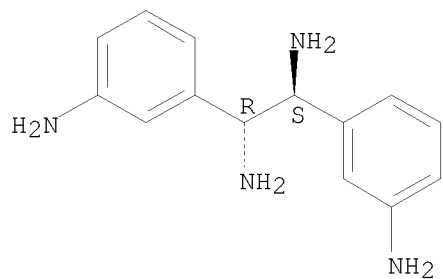


IT 91044-22-3P 91044-31-4P 91044-32-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 91044-22-3 CAPLUS

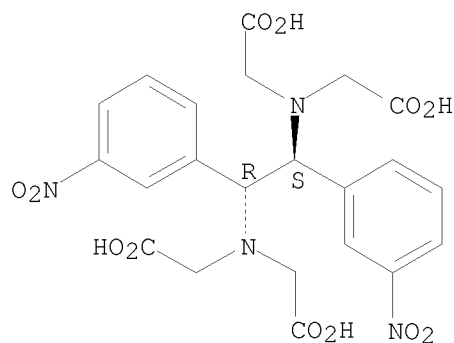
CN 1,2-Ethanediamine, 1,2-bis(3-aminophenyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



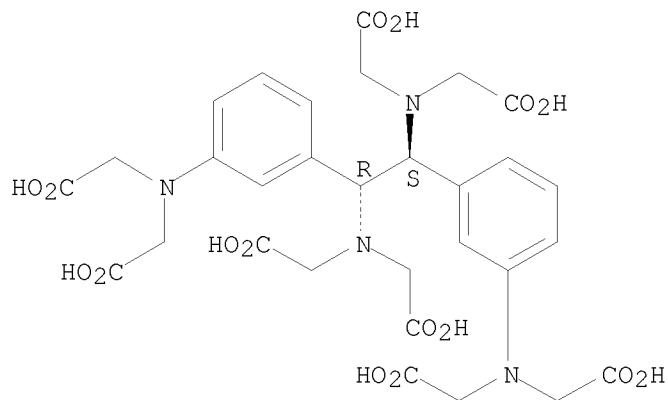
RN 91044-31-4 CAPLUS  
 CN Glycine, N,N'-[1,2-bis(3-amino-4-nitrophenyl)-1,2-ethanediyl]bis[N-(carboxymethyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 91044-32-5 CAPLUS  
 CN Glycine, N,N'-[[1,2-bis[bis(carboxymethyl)amino]-1,2-ethanediyl]di-3,1-phenylene]bis[N-(carboxymethyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 91044-21-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

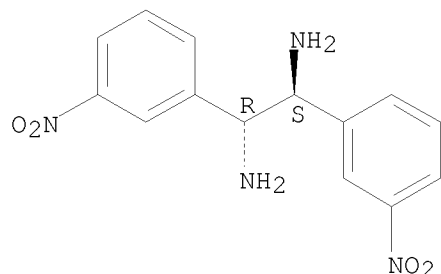
(Reactant or reagent)

(preparation, reduction, and N-alkylation of, by chloroacetate)

RN 91044-21-2 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 28 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1985:5792 CAPLUS

DOCUMENT NUMBER: 102:5792

ORIGINAL REFERENCE NO.: 102:1051a,1054a

TITLE: Studies on bimolecular reduction of Schiff bases and phenylhydrazones

AUTHOR(S): Zuberi, Rashid H.

CORPORATE SOURCE: Dep. Chem., Aligarh Muslim Univ., Aligarh, 202001, India

SOURCE: Science and Environment (1982), 4(1-2), 71-6  
CODEN: SCENE5; ISSN: 0970-5139

DOCUMENT TYPE: Journal

LANGUAGE: English

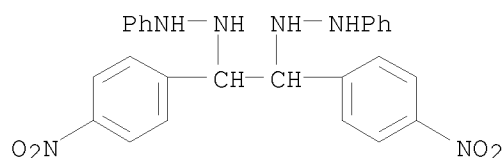
AB RR1C:Nph (R = Ph, substituted Ph, alkyl; R1 = H, Me, Ph, CO2H) were reduced by Zn-HgCl2 to PhNHCRR1CRR1NHPh. RR1C:NNHPh similarly gave PhNNHCRR1CRR1NHNHPh which on catalytic hydrogenation gave H2NCRR1CRR1NH2.

IT 74478-37-8P 74478-38-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrogenation of)

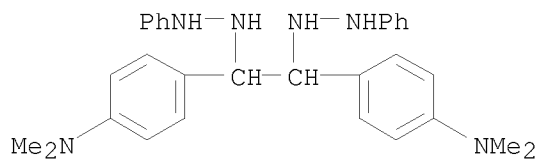
RN 74478-37-8 CAPLUS

CN Hydrazine, 1,1'-[1,2-bis(4-nitrophenyl)-1,2-ethanediyl]bis[2-phenyl- (9CI) (CA INDEX NAME)

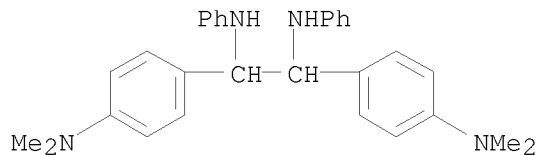


RN 74478-38-9 CAPLUS

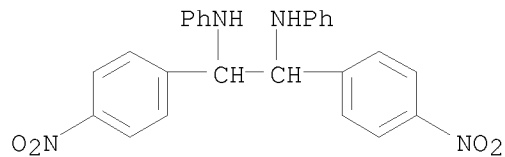
CN Benzenamine, 4,4'-[1,2-bis(2-phenylhydrazino)-1,2-ethanediyl]bis[N,N-dimethyl- (CA INDEX NAME)



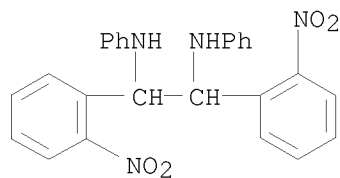
IT 74478-18-5P 74478-20-9P 74478-22-1P  
 93696-33-4P 93696-34-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 74478-18-5 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-diphenyl- (9CI)  
 (CA INDEX NAME)



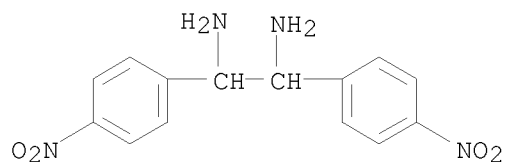
RN 74478-20-9 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



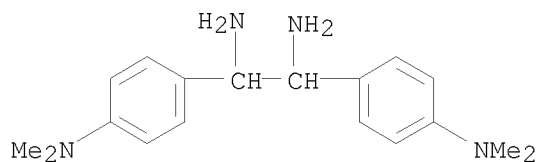
RN 74478-22-1 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(2-nitrophenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



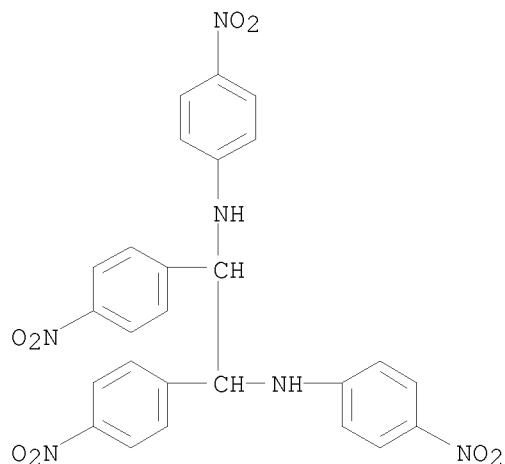
RN 93696-33-4 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)- (CA INDEX NAME)



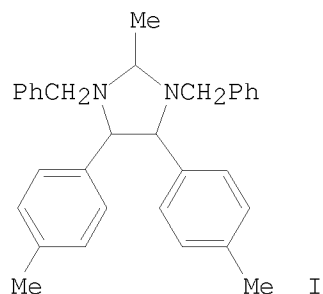
RN 93696-34-5 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]- (CA INDEX NAME)



L4 ANSWER 29 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1983:125508 CAPLUS  
 DOCUMENT NUMBER: 98:125508  
 ORIGINAL REFERENCE NO.: 98:19107a,19110a  
 TITLE: Reaction of dimethylsulfoxonium methylide with azomethines  
 AUTHOR(S): Zhitar, B. E.; Obukhov, A. E.; Baeva, I. G.  
 CORPORATE SOURCE: USSR  
 SOURCE: Deposited Doc. (1981), SPSTL 717 Khp-D81, 6 pp.  
 Avail.: SPSTL  
 DOCUMENT TYPE: Report  
 LANGUAGE: Russian  
 AB Me2S(O):CH2 reacted with RCH:NR1 (I; R = Ph, R1 = C6H4CO2H; R = R1 = p-O2NC6H4) in absolute Me2SO to give 30% MeS(O)CH2CHPhNHC6H4CO2H and 40% p-O2NC6H4NH[CH(C6H4NO2-p)]2NHC6H4NO2-p, resp. The analogous reaction of I (R = Ph; R1 = C6H4Br-m, m-tolyl) gave mixts. of the corresponding PhCMe:NR1 and MeS(O)CH2CHPhNHR1, whereas I (R = o-HOC6H4, m-O2NC6H4, R1 = 2-pyridyl; R = p-O2NC6H4, R1 = Ph; R = R1 = m-BrC6H4) gave only the corresponding RCMe:NR1.  
 IT 84998-88-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 84998-88-9 CAPLUS  
 CN 1,2-Ethanediamine, N,N',1,2-tetrakis(4-nitrophenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1983:16620 CAPLUS  
 DOCUMENT NUMBER: 98:16620  
 ORIGINAL REFERENCE NO.: 98:2691a,2694a  
 TITLE: Photoreductive dimerization of imines and formation of imidazolidines  
 AUTHOR(S): Pandey, G. P.  
 CORPORATE SOURCE: Dep. Chem., Banaras Hindu Univ., Varanasi, 221 005, India  
 SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1982), 21B(5), 467-70  
 CODEN: IJSBDB; ISSN: 0376-4699  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 98:16620  
 GI



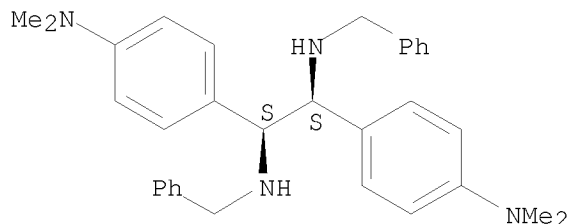
AB Irradiation of benzaldehyde N-benzylimines in EtOH or Me2CHOH yields meso- and dl-dihydrodimers of imines and imidazoline derivs. Thus, photolysis of 4-MeC6H4CN:NCH2Ph in EtOH for 4 h gave 24% meso-PhCH2NHCHRCHRNHCH2Ph (R = 4-MeC6H4), 16% meso-imidazolidine I and 17% dl-I.  
 IT 79344-33-5P 79344-37-9P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, by photolysis of benzaldehyde imine derivative)

RN 79344-33-5 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(phenylmethyl)-  
, (R\*,R\*)- (9CI) (CA INDEX NAME)

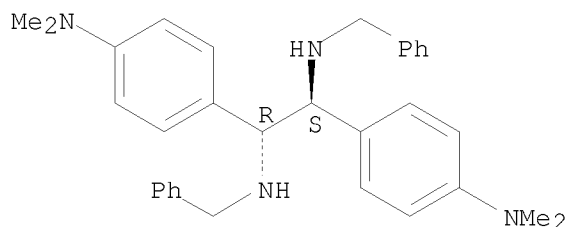
Relative stereochemistry.



RN 79344-37-9 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(phenylmethyl)-  
, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 31 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1981:550070 CAPLUS

DOCUMENT NUMBER: 95:150070

ORIGINAL REFERENCE NO.: 95:25103a,25106a

TITLE: Reductive coupling in substituted imines with aluminum amalgam in moist ether

AUTHOR(S): Joshi, S. C.; Mehrotra, K. N.

CORPORATE SOURCE: Dep. Chem., Banaras Hindu Univ., Varanasi, India

SOURCE: National Academy Science Letters (India) (1980), 3(9), 268-72

CODEN: NASLDX; ISSN: 0250-541X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 95:150070

AB The title reduction of R1CR2:NCHR3Ph (I; R1 = p-Me2NC6H4, R2 = H, R3 = H, Ph; R1 = Ph, p-tolyl; R2 = Me, R3 = H) gave dimers meso- and dl-(PhR3CHNHCR1R2)2 (II) and R1CHR2NHCHR3Ph. I (R1 = p-MeOC6H4; R2 = R3 = H) gave only meso-II and dl-1,3-benzyl-2,4,5-tris(4-methoxyphenyl)imidazolidine.

IT 79344-32-4P 79344-33-5P 79344-36-8P

79344-37-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

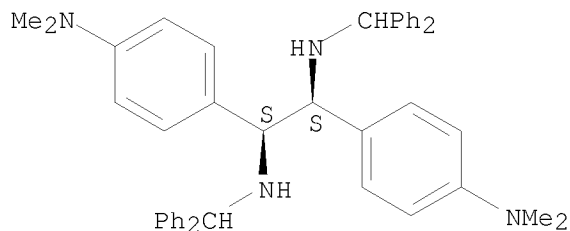


(preparation of, by reductive coupling of substituted imines)

RN 79344-32-4 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(diphenylmethyl)-, (R\*,R\*)- (9CI) (CA INDEX NAME)

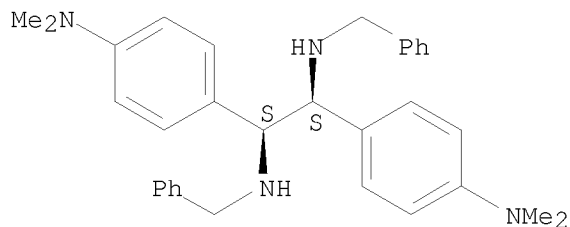
Relative stereochemistry.



RN 79344-33-5 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(phenylmethyl)-, (R\*,R\*)- (9CI) (CA INDEX NAME)

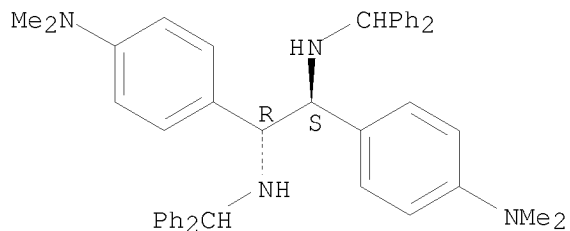
Relative stereochemistry.



RN 79344-36-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(diphenylmethyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

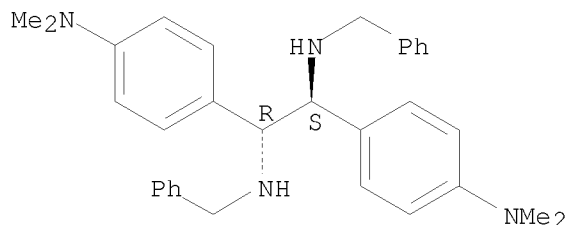
Relative stereochemistry.



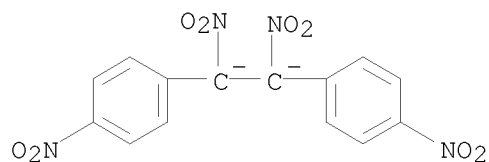
RN 79344-37-9 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-bis(phenylmethyl)-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

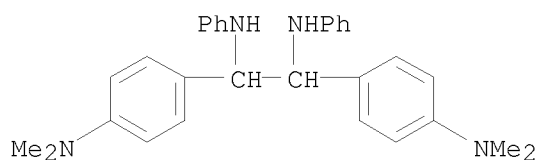


L4 ANSWER 32 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1981:102368 CAPLUS  
 DOCUMENT NUMBER: 94:102368  
 ORIGINAL REFERENCE NO.: 94:16687a,16690a  
 TITLE: Double reactivity of conjugated dianions of dinitro compounds. Reactions with bromine and diazonium salts  
 AUTHOR(S): Lipina, E. S.; Stepanov, N. D.; Bagal, I. L.; Bodina, R. I.; Perekalin, V. V.  
 CORPORATE SOURCE: Leningr. Gos. Pedagog. Inst., Leningrad, USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1980), 16(11), 2404-13  
 CODEN: ZORKAE; ISSN: 0514-7492  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB 4-RC6H4N2+ (I; R = Cl, Br, NO2) reacted with -O2N:CR(CR1:CR1)nCR:NO2- (II; R = H, Ph; R1 = H, Me, Ph; n = 0, 1) to give 4-RC6H4ON(O):CR(CR1:CR1)nCR:N(O)OC6H4R-4 and N2. II have low oxidation potentials and are exceptionally soft nucleophiles. These findings and MO calcns. explained the above reactions of II with I and the redox processes observed in reactions of II with Br2.  
 IT 76690-59-0  
 RL: PRP (Properties)  
 (redox potential of)  
 RN 76690-59-0 CAPLUS  
 CN Benzene, 1,1'-(1,2-dinitro-1,2-ethanediyl)bis[4-nitro-, ion(2-) (9CI) (CA INDEX NAME)

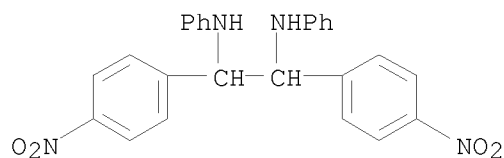


L4 ANSWER 33 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1980:549911 CAPLUS  
 DOCUMENT NUMBER: 93:149911  
 ORIGINAL REFERENCE NO.: 93:23887a,23890a  
 TITLE: Reduction of Schiff's bases and phenylhydrazones by zinc dust  
 AUTHOR(S): Khan, Naseem H.; Zuberi, Rashid H.; Siddiqui, Amin A.  
 CORPORATE SOURCE: Dep. Chem., Aligarh Muslim Univ., Aligarh, 202001, India

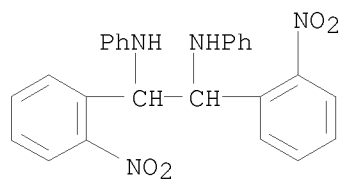
SOURCE: Synthetic Communications (1980), 10(5), 363-71  
 CODEN: SYNCAV; ISSN: 0039-7911  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 93:149911  
 AB Schiff bases RR1C:NPh (R = optionally substituted Ph, 4-pyridyl, 3-furanyl, Me, Et; R1 = H, Me) and hydrazones RR1C:NNHPh treated with Zn dust in CCl4-EtOH gave 79-95% PhNH(CRR1)2NHPh and 61-98% PhNHNH(CRR1)2NHNHPh, resp.  
 IT 74478-18-5P 74478-20-9P 74478-22-1P  
 74478-37-8P 74478-38-9P 74478-42-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 74478-18-5 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-N,N'-diphenyl- (9CI)  
 (CA INDEX NAME)



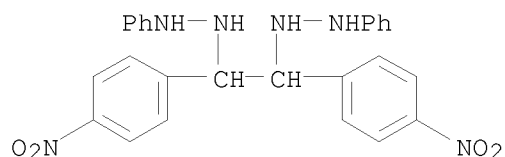
RN 74478-20-9 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



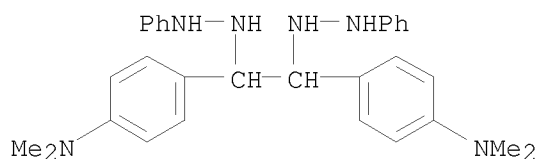
RN 74478-22-1 CAPLUS  
 CN 1,2-Ethanediamine, 1,2-bis(2-nitrophenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



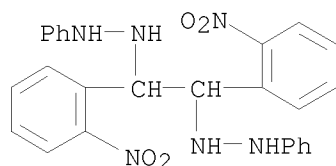
RN 74478-37-8 CAPLUS  
 CN Hydrazine, 1,1'-[1,2-bis(4-nitrophenyl)-1,2-ethanediyl]bis[2-phenyl- (9CI)  
 (CA INDEX NAME)



RN 74478-38-9 CAPLUS  
 CN Benzenamine, 4,4'-[1,2-bis(2-phenylhydrazino)-1,2-ethanedithio]bis[N,N-dimethyl- (CA INDEX NAME)



RN 74478-42-5 CAPLUS  
 CN Hydrazine, 1,1'-[1,2-bis(2-nitrophenyl)-1,2-ethanedithio]bis[2-phenyl- (9CI)  
 (CA INDEX NAME)



L4 ANSWER 34 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1980:446756 CAPLUS  
 DOCUMENT NUMBER: 93:46756  
 ORIGINAL REFERENCE NO.: 93:7739a,7742a  
 TITLE: Reactions of trimethylsilyl cyanide and N-(trimethylsilyl)diphenylmethylenamine with nitrones and thermal decompositions of their adducts  
 AUTHOR(S): Tsuge, Otohiko; Urano, Satoshi; Iwasaki, Takahiko  
 CORPORATE SOURCE: Res. Inst. Ind. Sci., Kyushu Univ., Fukuoka, 812, Japan  
 SOURCE: Bulletin of the Chemical Society of Japan (1980), 53(2), 485-9  
 CODEN: BCSJA8; ISSN: 0009-2673  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 93:46756  
 AB Me3SiCN (I) and Me3SiN:CPh2 (II) reacted with  $\alpha$ -aryl-N-phenylnitrones to afford the corresponding 1:1 adducts ArCH(CN)NPhOSiMe3 (III) and Ph2C:NCHArNPhOSiMe3 (IV), resp. Thermal decomposition of III in refluxing xylene gave azoxybenzene, stereoisomers of 2,3-diarylsuccinonitriles,  $\alpha$ -iminonitriles and/or benzanilides, whose yields depended on the nature of substituents on the Ar group of

III. On heating in benzene, IV afforded a mixture of azoxybenzene and meso-N,N'-bis(diphenylmethylene)-1,2-diarylethylenediamines. On the other hand, reactions of I and II with N-(diphenylmethylene)aniline N-oxide or N-(9-fluorenylidene)aniline N-oxide did not give the corresponding 1:1 adducts, but instead compds. arising from thermal decomposition of initial 1:1 adducts were directly obtained. The reaction of I with N-[p-(diethylamino)phenyl]- $\alpha$ -phenylnitrone leading to the corresponding  $\alpha$ -imino nitrile is also described.

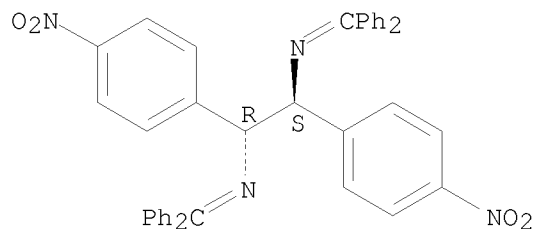
IT 74225-47-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 74225-47-1 CAPLUS

CN 1,2-Ethanediamine, N,N'-bis(diphenylmethylene)-1,2-bis(4-nitrophenyl)-,  
(R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 35 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1979:584937 CAPLUS

DOCUMENT NUMBER: 91:184937

ORIGINAL REFERENCE NO.: 91:29661a,29664a

TITLE: Electrophotographic photosensitive materials

INVENTOR(S): Hashimoto, Mokoto; Sasaki, Masaomi; Ohta, Masafumi;  
Tsutsui, Kyoji; Sakai, Kiyoshi; Kazami, Takeo

PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54065038	A	19790525	JP 1977-131037	19771101
DE 2844507	A1	19790426	DE 1978-2844507	19781012
DE 2844507	C2	19841213		
PRIORITY APPLN. INFO.:			JP 1977-125183	A 19771020
			JP 1977-131037	A 19771101

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB In preparing electrophotog. plates containing charge-carrier generating pigments

and charge-carrier transporting agents, the charge-carrier transport agents are selected from compds. of the general formulas I (R = C1-7 alkyl; R1, R2 = H, lower alkyl, NO2, halo; m, n = 1, 2 and  $\geq 1$  of m or n is 2), II (R3 = H, halo, lower alkyl, NO2, lower alkoxy), III (R4 = H, lower alkyl, lower alkoxy, halo), IV (R5 = H, lower alkyl, halo, NO2, alkoxy), V (R6 = H, R9C6H4, R9C6H4CH2; R7 = R9C6H4, R9C6H4CH2; R8, R9 = H, Me, Et, Cl, Br, MeO, NO2; n = 1, 2], and VI (R10 = aryl; R11 = Ph, naphthyl; R12 = H, Me, halo, MeO, NO2; and R10 and R11 may have substituents selected from halo, NO2, Me, MeO, CO2H, and Ph). Thus, an Al support was coated with a dispersion containing Diane Blue and subsequently with a composition containing

1,1-bis[4-(N-benzyl-N-phenethylamino)phenyl]propane  
and polycarbonate to give an electrophotog. plate whose E1/2 sensitivity was 6.9 lx-s.

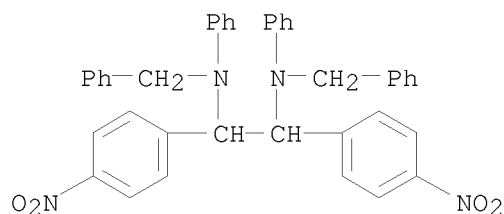
IT 70581-41-8

RL: USES (Uses)

(electrophotog. charge-carrier transport agent)

RN 70581-41-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-N,N'-diphenyl-N,N'-bis(phenylmethyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 36 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1976:120844 CAPLUS

DOCUMENT NUMBER: 84:120844

ORIGINAL REFERENCE NO.: 84:19621a,19624a

TITLE: The diaza-Cope rearrangement

AUTHOR(S): Voegtle, Fritz; Goldschmitt, Ernst

CORPORATE SOURCE: Inst. Org. Chem., Univ. Wuerzburg, Wuerzburg, Fed. Rep. Ger.

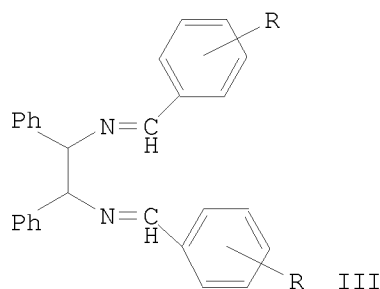
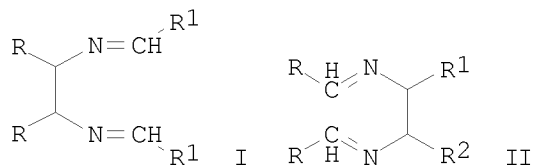
SOURCE: Chemische Berichte (1976), 109(1), 1-40  
CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 84:120844

GI



AB A notation is proposed which allows a simple and clear designation of [3.3]-sigmatropic shifts. Stereochem. investigations show that the configuration as well as the preferred conformations of the diimines I ( $R = R_1 = H$ , alkyl, aryl) strongly influence the geometry of the transition state of the thermally induced diaza-Cope rearrangement I  $\rightleftharpoons$  II. In meso-1,3,4,6-tetraaryl-2,5-diaza-1,5-hexadienes I ( $R = R_1 = \text{aryl}$ ) rearrangement passing through a boat-shaped transition state is preferred, whereas the racemic double Schiff bases pass through the chair form transition state. The activation barrier for the valence isomerization is higher, if the six center transition state is involved. The hydroxy group as a factor determining the equilibrium of the valence isomerization of the meso-dialdimines III ( $R = 2\text{-OH}, H, 4\text{-MeO}, \text{etc.}$ ) is discussed. This salicyl effect is utilized as a very general synthetic principle: new meso-1,2-diarylethylenediamines may easily be synthesized via stereospecific diaza rearrangement by C-C-coupling of two carbonyl functions.

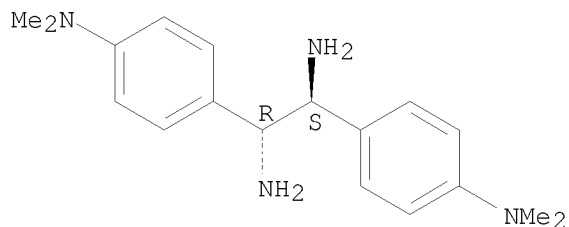
IT 58519-88-3P 58520-01-7P 58520-02-8P  
58520-39-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 58519-88-3 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis[4-(dimethylamino)phenyl]-, (1R,2S)-rel- (CA  
INDEX NAME)

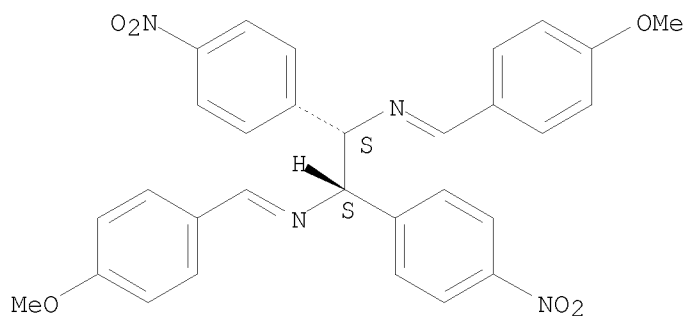
Relative stereochemistry.



RN 58520-01-7 CAPLUS

CN 1,2-Ethanediamine, N,N'-bis[(4-methoxyphenyl)methylene]-1,2-bis(4-nitrophenyl)-, (R\*,R\*)- (9CI) (CA INDEX NAME)

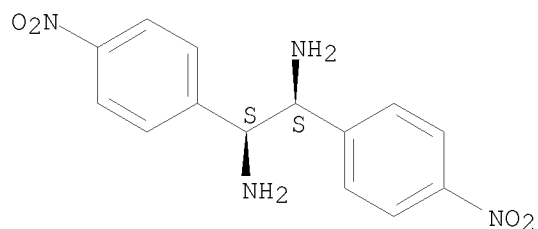
Relative stereochemistry.  
Double bond geometry unknown.



RN 58520-02-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(4-nitrophenyl)-, (R\*,R\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

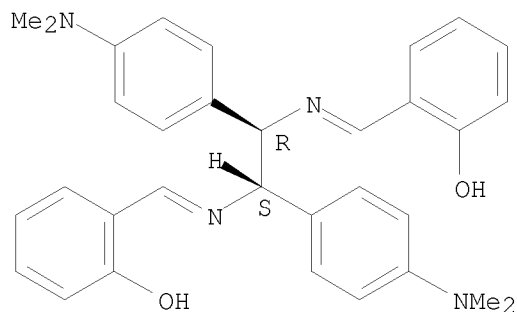


RN 58520-39-1 CAPLUS

CN Phenol, 2,2'-[[1,2-bis[4-(dimethylamino)phenyl]-1,2-ethanediyl]bis(nitrilomethylidyne)]bis-, (R\*,S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry unknown.





L4 ANSWER 37 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1974:9934 CAPLUS

DOCUMENT NUMBER: 80:9934

ORIGINAL REFERENCE NO.: 80:1613a,1616a

TITLE: Synthesis of phenyl-substituted stilbenediamines and their complexes with nickel(II)

AUTHOR(S): Sadler, William A.; House, Donald A.

CORPORATE SOURCE: Chem. Dep., Univ. Canterbury, Christchurch, N. Z.

SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1973), (18), 1937-41  
CODEN: JCDBTBI; ISSN: 0300-9246

DOCUMENT TYPE: Journal

LANGUAGE: English

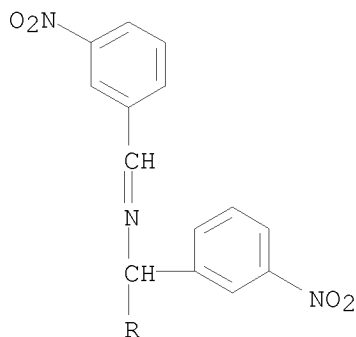
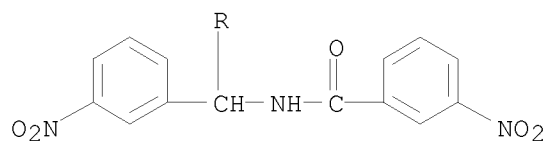
AB Addnl. data considered in abstracting and indexing are available from a source cited in the original document. Seven meso diamines, 1,2-bis(2-chloro-, -3-chloro-, -4-chloro-, -4-fluoro-, -3,4-dichloro-, 3-nitro-, and -3-methylphenyl)ethylenediamine were prepared by reaction of the corresponding benzaldehyde with NH<sub>4</sub>OAc and hydrolysis of the resulting N-benzoyl-N'-benzylidene-meso-1,2-diphenylethylenediamine with H<sub>2</sub>SO<sub>4</sub>. The diamines were reacted with Ni(OAc)<sub>2</sub>, NiCl<sub>2</sub>, Ni(NO<sub>3</sub>)<sub>2</sub>, and Ni(ClO<sub>4</sub>)<sub>2</sub> to give octahedral (blue, paramagnetic) or square planar (yellow, diamagnetic) bis(diamine)nickel(II) complexes.

IT 50802-46-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 50802-46-5 CAPLUS

CN Benzamide, N-[1,2-bis(3-nitrophenyl)-2-[[3-nitrophenyl)methylene]amino]ethyl]-3-nitro- (CA INDEX NAME)



L4 ANSWER 38 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1969:421467 CAPLUS

DOCUMENT NUMBER: 71:21467

ORIGINAL REFERENCE NO.: 71:3937a,3940a

TITLE: Mechanism of the photoreduction of  
N-Alkylbenzylidenimines

AUTHOR(S): Padwa, Albert; Bergmark, William; Pashayan, Deran

CORPORATE SOURCE: State Univ. of New York, Buffalo, NY, USA

SOURCE: Journal of the American Chemical Society (1969),  
91(10), 2653-60

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

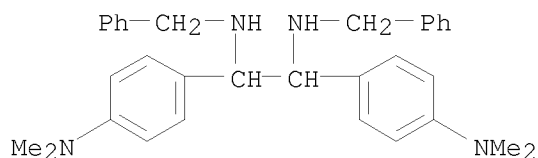
AB The mechanism and scope of the photoredn. of some aryl N-alkylimines is described. Irradiation of a series of benzaldehyde N-alkylimines in 95% ethanol afford dihydro photodimers, whereas irradiation of several benzophenone N-alkylimines gives the reduced benzhydrylalkylamines. The excited states of the imines were not reactive intermediates but instead ketyl radicals were clearly implicated as the active reducing agent. These ketyl radicals were derived from carbonyl compds. present in the reaction mixture as an impurity, an added sensitizer, or as a photogenerated species. Comment is made regarding the relevance of these results to previous reports of imine photoredn. and photoalkylation.

IT 24431-23-0P

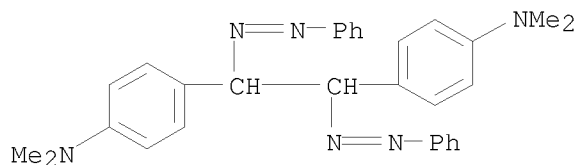
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 24431-23-0 CAPLUS

CN Bibenzyl- $\alpha,\alpha',4,4'$ -tetramine,  
Na,Na'-dibenzyl-N4,N4,N4',N4'-tetramethyl- (8CI) (CA INDEX  
NAME)



L4 ANSWER 39 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1968:402622 CAPLUS  
 DOCUMENT NUMBER: 69:2622  
 ORIGINAL REFERENCE NO.: 69:491a,494a  
 TITLE: Carbonylazo compounds. II. Addition of  $\alpha$ -carbonylazo compounds to phenylhydrazones  
 AUTHOR(S): Fahr, Egon; Rupp, Hans D.  
 CORPORATE SOURCE: Univ. Wuerzburg, Wuerzburg, Fed. Rep. Ger.  
 SOURCE: Justus Liebig's Annalen der Chemie (1968), 712, 93-9  
 CODEN: JLACBF; ISSN: 0075-4617  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 69:2622  
 AB RHC:NNHR' (R = Me, Ph or substituted aryl; R' = Ph or substituted aryl) were treated with R<sub>2</sub>N:NR<sub>3</sub> (R<sub>2</sub> and R<sub>3</sub> are CO<sub>2</sub>Ph, CO<sub>2</sub>Et, CO<sub>2</sub>CH<sub>2</sub>-Ph or Ph) to give R'<sub>2</sub>N:NCHRNHR<sub>2</sub>NHR<sub>3</sub>, the structure of which was established spectroscopically. 15 references.  
 IT 18196-47-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 18196-47-9 CAPLUS  
 CN  $\alpha, \alpha'$ -Bi-p-toluidine, N,N,N',N'-tetramethyl- $\alpha, \alpha'$ -bis(phenylazo)- (8CI) (CA INDEX NAME)



L4 ANSWER 40 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1967:516678 CAPLUS  
 DOCUMENT NUMBER: 67:116678  
 ORIGINAL REFERENCE NO.: 67:21963a,21966a  
 TITLE: Cytostatic compounds. VII. Effect of aldimine structure on the N,N'-dialkyl- $\alpha, \alpha'$ -diphenylethylenediamine-benzylalkylamine ratio formed in the reduction of benzylidenealkylamines with activated aluminum  
 AUTHOR(S): Schoenenberger, Helmut; Thies, Heinrich; Rappl, A.  
 CORPORATE SOURCE: Univ. Munich, Munich, Fed. Rep. Ger.  
 SOURCE: Archiv der Pharmazie und Berichte der Deutschen

Pharmazeutischen Gesellschaft (1967), 300(6), 483-91  
 CODEN: APBDAJ; ISSN: 0376-0367

DOCUMENT TYPE: Journal

LANGUAGE: German

AB cf. CA 67: 21262k. The formation of the dimeric reduction product was found to be affected by the stability of the intermediate radical which is related to the number of possible mesomeric structures of the aldimine (Schiff's base) and to the concentration of the reaction solution [TABLE OMITTED]

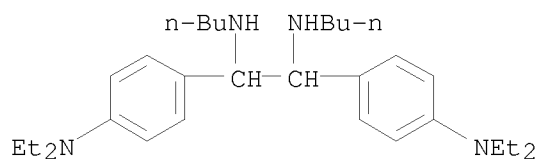
The observed reaction route (% dimer formed) by reduction of 0.025 mole Schiff base with 0.075 mole Al and 200 mg. HgCl<sub>2</sub> in 100 ml. and 25 ml. EtOH is shown in the 1st table. Yields and phys. properties are given in the 2nd table. [TABLE OMITTED]

IT 16183-30-5P 16183-31-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

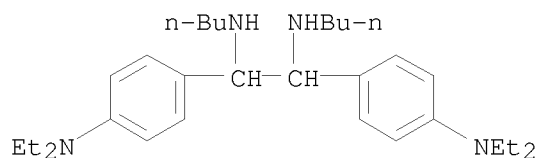
RN 16183-30-5 CAPLUS

CN Ethylenediamine, N,N'-dibutyl-1,2-bis[p-(diethylamino)phenyl]- (8CI) (CA INDEX NAME)



RN 16183-31-6 CAPLUS

CN Ethylenediamine, N,N'-dibutyl-1,2-bis[p-(diethylamino)phenyl]-, dihydrochloride (8CI) (CA INDEX NAME)



● 2 HCl

L4 ANSWER 41 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1958:25293 CAPLUS

DOCUMENT NUMBER: 52:25293

ORIGINAL REFERENCE NO.: 52:4528a-i, 4529a-h

TITLE: Rearrangement of  
 2,4,6-trimethylbenzyltrimethylammonium ion by sodium  
 amide to form an exo-methylenecyclohexadienamine and  
 its reactions

AUTHOR(S): Hauser, Charles R.; Van Eenam, Donald N.

CORPORATE SOURCE: Duke Univ., Durham, NC

SOURCE: Journal of the American Chemical Society (1957), 79, 5512-20

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB  $\alpha$ 2-Isoduryl chloride (I) (94.0 g.), b20 124-6°, m.

36-7°, in 200 cc. absolute MeOH treated with swirling with 66 g. liquid anhydrous Me3N during 0.5 hr. with occasional cooling in ice, kept 1 hr. at room temperature, diluted slowly with 1 l. Et2O, and filtered off, and the residue

washed with Et2O and dried in vacuo yielded 98% [2,4,6-Me3C6H2CH2NMe3]Cl (II), m. 220-1° (from MeCN-Et2O); picrate, m. 172-2.5°

(H2O). Finely powdered II (34.2 g.) added during 5-10 min. with stirring to 0.45 mole NaNH2 in 500 cc. liquid NH3, stirred about 2 hrs., treated with 16.5 g. NH4Cl, and diluted with 250 cc. dry Et2O, the NH3 evaporated on the steam bath, the residual mixture cooled, treated with swirling with 50 cc. 5N NaOH, and rapidly steam-distilled, the distillate (approx. 1 l.) saturated with solid Na2CO3 and extracted with Et2O, and the extract washed with H2O, dried, and evaporated gave 20.1 g. residual

6-methylene-1,3,5-trimethyl-1-dimethylaminomethylcyclohexa-2,4-diene (III) n25D 1.5110; the steam distillation residue gave 8.0 g. gummy residue. Crude III (20.1 g.) fractionated gave 13.6 g. pure III, b0.4 50-1°, n25D 1.5111, 2.0 g. 2,4,6-Me3C6H2(CH2)2NMe2 (IV), b0.4 73-4°, and 4.3 g. polymeric residue. III and MeI in MeCN yielded III.MeI, m. 153-4°

(decomposition), which decomposed partially on standing. In a similar run for the preparation of III, the reaction mixture diluted with 600 cc. Et2O, the NH3 evaporated, the Et2O suspension filtered, the filtrate evaporated, and the residue

steam-distilled and worked up in the usual manner gave IV. III (11.5 g.) heated 1 hr. at 150° and distilled yielded 9.5 g. IV, b5 111.5-12°, n25D 1.5088; picrate, m. 169.5-70.5° (from 95% EtOH). A series of similar isomerizations of III was carried out in solvents (solvent, temperature, reaction time in hrs., % yield, and % recovery given): C6H6, 80°, 6, 62, 28; Et2O, 36°, 36, 39, 53; Et2O, room temperature, 720, 48, 73; petr. ether, room temperature, 720, 32, 59;

none, room

temperature, 720, 21, 76. In the runs with solvents the III was added to 100 cc. solvent at the desired temperature and the mixture heated the specified

time;

the reactions at room temperature were run in the dark; the reaction mixts. treated with 200 cc. 6N HCl gave isodurene (V) from the unreacted III. Grignard reagent from 39.8 g. bromomesitylene and 5.1 g. Mg in 1500 cc. Et2O treated 15 min. with cooling and stirring with 17.6 g. ethylene oxide in 50 cc. dry C6H6, kept at room temperature overnight, hydrolyzed with dilute acid, and worked up gave 19.7 g. 2,4,6-Me3C6H2(CH2)2OH (VI), b15 150-2°, m. 77-8°. VI (19.7 g.) in 50 cc. C6H6 treated with 27.0 g. PBr3 in 100 cc. C6H6 yielded 19.8 g. 2,4,6-Me3C6H2(CH2)2Br (VIA), m. 73.5-74°. VIA (19.8 g.) in 100 cc. absolute EtOH treated with shaking with 40 g. liquid anhydrous Me2NH, kept 2 months in the dark in a screw-cap bottle, and evaporated on the steam bath, the dark residue treated with excess 50% NaOH and extracted with Et2O, the Et2O extract reextd. with 6N HCl, the acid extract basified with 50% aqueous NaOH, and the liberated base distilled gave 12.1 g. IV, b5 111-12.5°, n25D 1.5089; picrate, m. 170.5-1.5° (95% EtOH). III (19.1 g.) added in 1 portion with stirring to 250 cc. cold 6N HCl, kept 5 min., and extracted with Et2O, and the extract worked up gave 12.0 g. V. The aqueous layer boiled 5 min., cooled to 0°, and basified to pH 9-10 with 50% aqueous NaOH, part of the solution

bubbled 15 min. with air, and the air passed into a hot 2,4-(O<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NHNH<sub>2</sub> solution gave 2,4-(O<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NHN:CH<sub>2</sub>, m. 164-5°; another part treated with shaking with 13.0 g. PhNCS gave 85% Me<sub>2</sub>NCSNHPh, m. 134-5° (EtOH). III (9.6 g.) in 100 cc. dry petr. ether (b. 30-60°) treated with swirling with excess dry HCl, the precipitated III.HCl dried in vacuo at 70° and added slowly with stirring to a large excess cold 20% aqueous NaOH, the mixture extracted with Et<sub>2</sub>O, the extract dried and evaporated, and the residue treated with 14.2 g. MeI in a small amount MeOH and diluted with dry Et<sub>2</sub>O gave III.MeI, m. 153-4° (decomposition); the filtrate distilled gave 0.7 g. crude V. III.HCl added to cold H<sub>2</sub>O yielded 5.9 g. V. III.HCl (from 9.6 g. III) dissolved at room temperature in 50 cc. glacial AcOH, treated with MeI, and poured slowly after 1 min. with stirring into excess 50% aqueous NaOH gave 13.4 g. III.MeI, and 1.0 g. V; a similar run gave during 0.5 hr. 3.6 g. III.MeI and 5.0 g. V. III (9.6 g.) treated with stirring with 50 cc. glacial AcOH, cooled to room temperature, kept 1 hr., and worked up in the usual manner gave 15.1 g. III.MeI, and 0.4 g. crude V. Br (19.2 g.) in 200 cc. CCl<sub>4</sub> added dropwise during 0.5 hr. with stirring and cooling to 19.1 g. III in 200 cc. CCl<sub>4</sub>, warmed during 1 hr. with stirring to room temperature, filtered, and distilled, and the residue crystallized from petr. ether yielded 18.2 g. 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CH<sub>2</sub>Br (VII), m. 50-1°; the filter residue treated with aqueous NaOH gave CH<sub>2</sub>O and Me<sub>2</sub>NH. 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>COCl (45.7 g.) in 500 cc. dry Et<sub>2</sub>O added dropwise with stirring to 9.5 g. LiAlH<sub>4</sub> in 700 cc. absolute Et<sub>2</sub>O, kept overnight, and worked up yielded 37.1 g. 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>OH (VIII), needles, m. 86.5-7.5°. VIII (20.0 g.) and 250 g. 48% HBr heated 4 hrs. with stirring on the steam bath and cooled gave 25.6 g. VII, m. 49.5-50.5° (from petr. ether). III (19.1 g.) in 100 cc. Et<sub>2</sub>O added with stirring to BuLi from 2.1 g. Li and 19.3 g. BuBr in 250 cc. Et<sub>2</sub>O, stirred 10 min. at room temperature, cooled to 0° while being treated dropwise with 100 cc. cold H<sub>2</sub>O and extracted with dilute acid, the extract basified with aqueous NaOH and extract with Et<sub>2</sub>O, and the extract worked up gave 20.8 g. mixed amylcyclohexadieneamines (IX), b<sub>0.3</sub> 85-6°, n<sub>25D</sub> 1.4820; picrate, m. 140-1° (95% EtOH). The acid-extracted Et<sub>2</sub>O layer gave 1.0 g. crude amylmesitylene (X), n<sub>25D</sub> 1.4978. IX (24.9 g.) in 100 cc. Et<sub>2</sub>O added rapidly with stirring to BuLi from 0.30 g. atom Li and 0.133 mole BuBr, poured onto 50 g. crushed Dry Ice, and shaken with 200 cc. 25% aqueous NaOH, and the aqueous layer acidified to pH 5 gave 25 g. viscous oil which above 300° evolved Me<sub>3</sub>N and gave a large amount of resinous material. IX (12.5 g.) treated with BuLi from 0.15 g. atom Li and 0.067 mole BuBr in 200 cc. Et<sub>2</sub>O, the mixture treated with stirring with 5.4 g. PhNCO, stirred 10 min. at room temperature, and hydrolyzed with 100 cc. cold H<sub>2</sub>O, and the Et<sub>2</sub>O layer evaporated gave 15.5 g. viscous, noncrystallizable liquid, apparently an amino anilide. IX (33.0 g.) in 300 cc. Et<sub>2</sub>O treated with BuLi from 5.8 g. Li and 54.8 g. BuBr, refluxed 10 hrs. with stirring, and treated with cooling with 250 cc. H<sub>2</sub>O, the Et<sub>2</sub>O layer extracted with diluted acid to remove 5.6 g. unchanged IX, b<sub>0.3</sub> 85-7°, n<sub>25D</sub> 1.4823, washed, dried, and evaporated, and the residue distilled gave 16.6 g. X, b<sub>3</sub> 103-3.5°, n<sub>25D</sub> 1.4982, converted to the sulfonamide derivative, m. 103-4° (hexane containing 2% C<sub>6</sub>H<sub>6</sub>). (AmO)<sub>2</sub>SO, b<sub>5</sub> 111-12°, oxidized by the method of Suter and Gerhart (C.A. 33, 53561) gave 85% (AmO)<sub>2</sub>SO<sub>2</sub> (XI), b<sub>1</sub> 114-16°, n<sub>25D</sub> 1.4280. XI (152.5 g.) in 100 cc. Et<sub>2</sub>O added dropwise during 45 min. at 10° with stirring to the Grignard reagent from 8.1 g. Mg, 31.9 g. bromomesitylene, and 17.6 g. EtBr in 200 cc. Et<sub>2</sub>O, the

mixture stirred 18 hrs. at room temperature and treated dropwise with 300 cc. cold

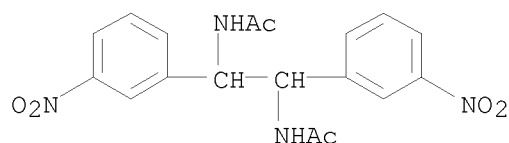
6N HCl, the Et<sub>2</sub>O layer evaporated, the residue added to 1 mole NaOEt in 350 cc. refluxing EtOH, the mixture cooled after 0.5 hr., neutralized with dilute acid, and extracted with Et<sub>2</sub>O, and the extract worked up gave 17.2 g. X, b<sub>3</sub> 102-3°, n<sub>D</sub><sup>25</sup> 1.4980. A series of reactions of III was carried out with various Bu reagents in refluxing Et<sub>2</sub>O (Bu reagent, ratio Bu reagent/III, reaction time in hrs., % yield IX, and % yield X given): BuNa, 2:1, 2, 72, 17; BuMgBr, 1:1, 24, 73, 8; BuLi, 2:1, 0.33, 73, 9; BuLi, 1:1, 0.16, 83, 5; BuLi, 2:1, 10, 17, 67. BuNa from 11.5 g. powdered Na and 23.2 g. BuCl in 100 cc. Et<sub>2</sub>O stirred 2 hrs. at 0°, treated during 5 min. with 19.1 g. III in 150 cc. Et<sub>2</sub>O, and worked up after 2 hrs. gave 17.9 g. IX and 3.2 g. X. BuMgBr (from 3.9 g. Mg and 20.6 g. BuBr) in 100 cc. Et<sub>2</sub>O treated with 19.1 g. III in 150 cc. Et<sub>2</sub>O and worked up after 24 hrs. yielded 18.3 g. IX, 2.6 g. V, and 1.5 g. X. III (38.2 g.) in EtOH hydrogenated at 55°/400 lb. over Raney Ni and evaporated, the residual oil dissolved in Et<sub>2</sub>O and extracted with dilute acid, and the acidic extract basified with 50% aqueous NaOH yielded 24.7 g. amine, C<sub>13</sub>H<sub>25</sub>N, b<sub>5</sub> 86-8.5° [picrate, m. 177-8° (decomposition) (95% EtOH)], and 5.4 g. IV; the Et<sub>2</sub>O layer yielded 1.5 g. (mainly) V.

IT 107821-88-5 110157-07-8

(Derived from data in the 6th Collective Formula Index (1957-1961))

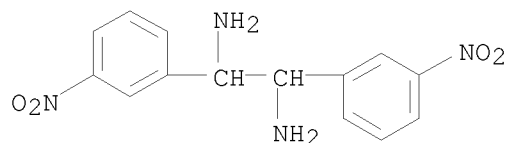
RN 107821-88-5 CAPLUS

CN Acetamide, N,N'-[1,2-bis(m-nitrophenyl)ethylene]bis- (6CI) (CA INDEX NAME)



RN 110157-07-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)- (CA INDEX NAME)



L4 ANSWER 42 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1958:25292 CAPLUS

DOCUMENT NUMBER: 52:25292

ORIGINAL REFERENCE NO.: 52:4527h-i, 4528a

TITLE: Reaction of benzaldehyde with ammonium acetate

AUTHOR(S): Trippett, S.

CORPORATE SOURCE: Univ. Leeds, UK

SOURCE: Journal of the Chemical Society (1957) 4407-8

CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB BzH (30 g.) refluxed with 60 g. NH<sub>4</sub>OAc (I) for 3 hrs., the mixture cooled, the product filtered, and washed repeatedly with EtOH gave 60% N-benzoyl-N'-benzylidene-meso-1,2-diphenylethylenediamine (II), m. 258-9° (BuOH). II (5 g.) refluxed with 60 ml. 70% H<sub>2</sub>SO<sub>4</sub> for 20 min., the solution poured onto ice, the resulting suspension extracted with ether

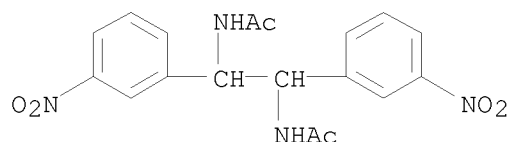
and then made alkaline with 2N NaOH gave N-benzoyl-meso-1,2-diphenylethylenediamine (III), m. 204-5° (aqueous EtOH); picrate, m. 204° (decomposition) (alc.); acetate, m. 316° (PhNO<sub>2</sub>). Hydrolysis of II or III with 70% H<sub>2</sub>SO<sub>4</sub> for 1 hr. gave meso-1,2-diphenylethylenediamine, m. 120.5-1.5° (ether). Similarly, p-chlorobenzaldehyde and I gave 65% N-p-chlorobenzoyl-N'-p-chlorobenzylidene-meso-1,2-di-p-chlorophenylethylenediamine (IV), m. 249° (BuOH). Hydrolysis of IV gave meso-1,2-di-p-chlorophenylethylenediamine, m. 137-8° (ether); diacetate, m. 360° (HOAc). m-Nitrobenzaldehyde and I gave a product which was insol. in all common solvents, but which did give meso-1,2-di-m-nitrophenylethylenediamine, m. 189-9° (BuOH); diacetate, m. 354-5° (HOAc).

IT 107821-88-5P, Acetamide, N,N'-[1,2-bis(m-nitrophenyl)ethylene]bis-, meso- 110157-07-8P, Ethylenediamine, 1,2-bis(m-nitrophenyl)-, meso-

RL: PREP (Preparation)  
(preparation of)

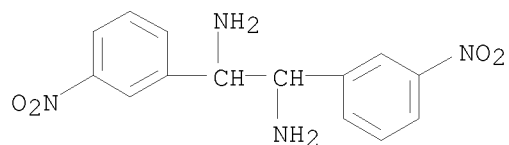
RN 107821-88-5 CAPLUS

CN Acetamide, N,N'-[1,2-bis(m-nitrophenyl)ethylene]bis- (6CI) (CA INDEX NAME)



RN 110157-07-8 CAPLUS

CN 1,2-Ethanediamine, 1,2-bis(3-nitrophenyl)- (CA INDEX NAME)



L4 ANSWER 43 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1953:44605 CAPLUS

DOCUMENT NUMBER: 47:44605

ORIGINAL REFERENCE NO.: 47:7504c-i, 7505a-b

TITLE: The Doebner reaction. XIX

AUTHOR(S): De Toma, Mario

CORPORATE SOURCE: Univ. Bari, Italy

SOURCE: Gazzetta Chimica Italiana (1952), 82, 40-5

CODEN: GCITA9; ISSN: 0016-5603



DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 46, 5047i.  $\text{AcCO}_2\text{H}$  (8.8 g. in 15 cc. EtOH) and then 14.3 g. 2-C10H7NH<sub>2</sub> in 90 cc. EtOH, added to boiling alc. p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CHO (15.1 g. in 100 cc.), refluxed 3 hrs., filtered, the solid washed with EtOH, treated with boiling 10% aqueous Na<sub>2</sub>CO<sub>3</sub>, filtered, washed with boiling water, the wash liquor combined with the hot alkaline solution, made acid with AcOH, and the precipitate

purified by solution in 1% alc. KOH and precipitation by glacial AcOH, yield 3-p-nitrophenylbenzo[f]-quinoline-1-carboxylic acid (I), m. 275°.

I dissolved in the calculated amount of hot 1% aqueous Na<sub>2</sub>CO<sub>3</sub> and allowed to stand

forms the light yellow Na salt, C<sub>20</sub>H<sub>11</sub>O<sub>4</sub>N<sub>2</sub>Na.4H<sub>2</sub>O, which, treated in aqueous solution with Me<sub>2</sub>SO<sub>4</sub> and the precipitate washed with boiling water and

crystallized from

glacial AcOH, yields the Me ester, C<sub>21</sub>H<sub>14</sub>O<sub>4</sub>N<sub>2</sub>, reddish to burnt orange, m. 245°. I (1 g.) and 4 g. soda-lime distilled and the product crystallized

from EtOH, yield 3-(p-nitrophenyl)benzo[f]quinoline, m. 190°. In AcOH with a chromate, it forms the chromate, (C<sub>19</sub>H<sub>12</sub>-O<sub>2</sub>N<sub>2</sub>).2.H<sub>2</sub>CrO<sub>4</sub>, reddish, and in aqueous HCl with H<sub>2</sub>PtCl<sub>6</sub> the chloroplatinate, (C<sub>19</sub>H<sub>12</sub>O<sub>2</sub>N<sub>2</sub>).2.H<sub>2</sub>PtCl<sub>6</sub>, yellow. The mother liquor from the purification of I, allowed to stand, concentrated, the precipitate extracted with boiling

dilute Na<sub>2</sub>CO<sub>3</sub>, and

the insol. portion dissolved in hot AcOH and allowed to stand, yields a mixture of N-(p-nitrobenzyl)-2-naphthylamine (II), brick-red, m.

125°, and N,N'-di-2-naphthyl-1,2-bis(p-nitrophenyl-ethylenediamine)

[ $\alpha$ ,  $\alpha'$ -bis(2-naphthylamino)-4, 4'-dinitrobibenzyl] (III),

yellow. III is 1 of 2 possible isomers, and is formed by reduction of the Schiff base, 2-C10H7N: CHC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-p by the reaction of Ciusa and Musajo

(C.A. 24, 1863; Masulli, following abstract). The Na<sub>2</sub>CO<sub>3</sub> solution from the isolation of II and III yields some I and a very small amount of an unidentified compound, m. 275°. I (1 g.) in 50 cc. NH<sub>4</sub>OH and aqueous

FeSO<sub>4</sub> (5 g. in 50 cc.), allowed to stand 12 hrs., filtered, the Fe(OH)<sub>3</sub> residue washed exhaustively, the filtrate acidified with AcOH, and the

precipitate purified by solution in 1% alc. KOH and precipitation by glacial AcOH, yield the

amine, C<sub>20</sub>H<sub>14</sub>O<sub>2</sub>N<sub>2</sub>.H<sub>2</sub>O, red, m. 280°, soluble in aqueous, inorg. acids.

With 2-naphthol it gives an intense brick-red compound. Aqueous KMnO<sub>4</sub> (0.92 g. in 50 cc.) added dropwise to alkaline I (1 g. in 50 cc. 2% KOH) on a steam

bath, filtered, the residue washed with hot water, the filtrate acidified with AcOH, the precipitate suspended in EtOH, brought into solution by aqueous

KOH,

filtered, and glacial AcOH added, gives

2-(p-nitrophenyl)-9-oxo-1-azafluorene-4-carboxylic acid (C.A. numbering)

(IV), C<sub>19</sub>H<sub>10</sub>O<sub>5</sub>N<sub>2</sub>.EtOH, wine-red, m. 270°. In AcOH with the calculated

weight of p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NHNH<sub>2</sub>, IV ppts. the p-nitrophenylhydrazone, bright red, m. 288°; its solns. in alc. KOH are intense blue, like solns. of other

p-nitrophenylhydrazones of other azafluorenecarboxylic acids, including unreported carboxylic acids, viz. the 2-(o-nitrophenyl)isomer of IV, and the 2-(p-nitrophenyl) and the 3-Ph, 3-(methylenedioxyphenyl), and

3-(p-methoxyphenyl) derivs, of 9-oxo-4-azafluorene-4-carboxylic acid. In an effort to find a relation between the colors of alc. KOH solns. of the

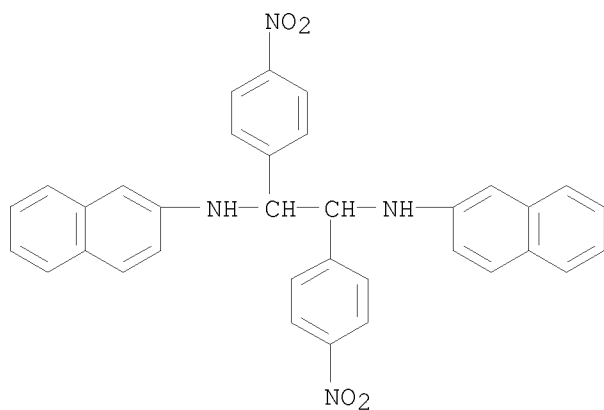
p-nitrophenylhydrazones of ketones, 11 such derivs. of aliphatic and aromatic ketones were prepared and the colors in alc. KOH were observed.

The following data give the ketone, the m.p. of its

p-nitrophenyl-hydrazone, the color of the latter, and the color of the

solution of the latter in 1% alc. KOH, resp.: Me<sub>2</sub>CO, 145°, orange-yellow, blood-red; MeEtCO, 130°, orange-yellow, brown-red; AcCO<sub>2</sub>H, 210°, egg-yellow, ruby-red; Michler ketone, 168°, orange-red, violet-red; PhCH:CHAc, 145°, cherry-red, dark violet; (PhCH:CH)<sub>2</sub>CO, 185°, carmine, dark blue; PhCH:CHCOCH:CHCH:CHPh, 153-5°, dark red, dark blue; phenanthrenequinone, 225°, scarlet, dark blue; Ph<sub>2</sub>CO, 148°, yellow, violet; AcPh, 180°, brick-red, purple-red; fluorenone, 143-4°, yellow, violet.

IT 859438-62-3, Ethylenediamine,  
N,N'-di-2-naphthyl-1,2-bis-(p-nitrophenyl)-  
(mixture containing)  
RN 859438-62-3 CAPLUS  
CN Ethylenediamine, N,N'-di-2-naphthyl-1,2-bis-(p-nitrophenyl)- (5CI) (CA  
INDEX NAME)



L4 ANSWER 44 OF 44 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1930:25925 CAPLUS

DOCUMENT NUMBER: 24:25925

ORIGINAL REFERENCE NO.: 24:2744b-i,2745a

TITLE: Derivatives of aminomethylhydroxyanthraquinones and dihydroxydianthraquinonylethylenes. II

AUTHOR(S): de Diesbach, Henri; Gubser, Paul; Lempen, Hans

SOURCE: Helvetica Chimica Acta (1930), 13, 120-37

CODEN: HCACAV; ISSN: 0018-019X

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C. A. 23, 2173. Hydroxyanthraquinones with methylol amides gave a condensation product which on saponification in the absence of air gave either the

aminomethylhydroxyanthraquinone (I) or an internal condensation derivative of isopyrrolanthrone. In the presence of air or of oxidizing agents 2 mols. united with loss of N to give dihydroxydianthraquinonylethylene (II). I derivs. on heating condensed easily, with autoreduction, yielding derivs. of dianthraquinonylethylenediamine (III). The half mols. of the II and III derivs. exist in two isomeric forms: Combinations of the type A + B give blue alkaline salts and give a blue color in H<sub>2</sub>SO<sub>4</sub> (IV). B + B give brown salts and blue solns, in IV. A + A give a green salt and a green solution in IV. The effects of various reagents on the double bond of

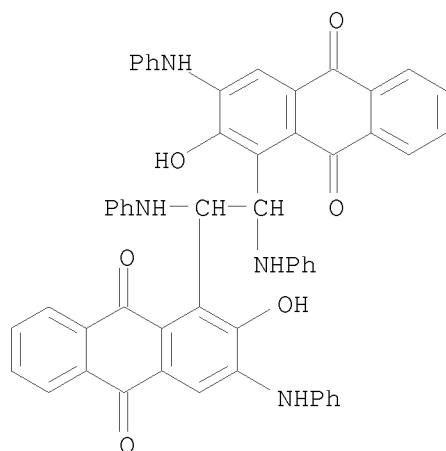
1,1'-[2,2'-dihydroxydianthraquinonyl]ethylene (V) were studied. V with Br<sub>2</sub> gave a quant, yield of the dibromoethane derivative, blue-violet in IV and brown in alkali. Heating with alkali partially reforms the double bond by removal of Br<sub>2</sub>, which may enter the ring in position 3. Subsequent oxidation yields 3-bromo-2-hydroxy-1-carboxyanthraquinone, m. 248° (from dilute alc.) with loss of CO<sub>2</sub>. The 3,3'-dicarboxy derivative of V, with Br<sub>2</sub> gave the dibromoethane derivative which with O<sub>2</sub> in alk, solution gave 2-hydroxy-1,3-dicarboxyanthraquinone. V with Cl<sub>2</sub> in H<sub>2</sub>O gave the dichloroethane derivative whose properties are like those of the di-Br homolog but which is more stable toward alkali. V in concentrated IV with dry Cl<sub>2</sub> gas gave a blue solution changing to a blue-violet. Addition of H<sub>2</sub>O gave a precipitate of the 3,3'-dichlorodichloroethane derivative (VI), insol. in Na<sub>2</sub>CO<sub>3</sub> solution, blue-violet in IV, brown in alkali, stable to O<sub>2</sub> in alkali, and an isomeric tetra-Cl derivative (VII) soluble in Na<sub>2</sub>CO<sub>3</sub> solution V, heated with Cl<sub>2</sub> gas in C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub> (VIII), gave VI only, V in VIII with SOCl<sub>2</sub> gave VI. V in PhNO<sub>2</sub> with SOCl<sub>2</sub> gave the 3,3'-di-Cl derivative (IX). 2-Hydroxy-3-chloroanthraquinone (X) in IV with methyloltrichloroacetamide gave 1-trichloroacetylaminomethyl-2-hydroxy-3-dichloroanthraquinone (XI), m. 246° (from glacial AcOH), yellow in IV and red in alkali XI heated with alkali in H<sub>2</sub> atmospheric gave 2-hydroxy-3-chloro-1,9-(N)-isopyrrolanthrone, a black powder, red in IV and in alkali. XI heated with alkali in presence of O<sub>2</sub> or NaNO<sub>2</sub> gave IX, a black powder, blue-violet in IV and brown in alkali, IX heated with O<sub>2</sub> in alkali gave a chlorohydroxycarboxylic acid, m. 242°, with loss of CO<sub>2</sub> and formation of 2-hydroxy-3-chloroanthraquinone. IX with HNO<sub>3</sub> in IV is oxidized to ?-nitro-2-hydroxy-3-chloro-1-carboxyanthraquinone, m. 124° (from dilute alc.). V heated with concentrated NH<sub>4</sub>OH gave the ethylenediamine derivative IX similarly gave its ethylenediamine derivative (XII) blue-violet in IV and brown in alkali which with IV and powd Cu gave IX. XII may also be prepared by adding methylolphthalimide to X in AcOH, thus obtaining N-[2-hydroxy-3-chloroanthraquinonylmethyl]phthalimide, m. 222° (from glacial AcOH) which gave a red solution in alkali which when heated was saponified and gave the addition product of X and phthalic acid. The dibromoethane derivative of V with NH<sub>4</sub>OH gave the ethylenediamine derivative VI with NH<sub>4</sub>OH gave the ethylenediamine deriv, and the tetraaminoethylene derivative V, with PhNH<sub>2</sub> gave the ethylenedi[phenylamino] derivative, green in IV, brown in alkali. VI with PhNH<sub>3</sub> gave the 3,3'-di[phenylamino]ethylenedi[phenylamino] derivative, green in IV, brown in alkali. V with KNO<sub>3</sub> in IV gave the 3,3'-dinilrodinitroethane derivative, blue in IV, brown in alkali, and a hexanitro derivative (XIII), which is largely oxidized to 2,3-dinitro-2-hydroxy-1-carboxyanthraquinone, m. 223° (from dilute alc.). XIII, reduced, then boiled with HCl, gave 1,1'-[2,2',3,3'-tetrahydroxydianthraquinonyl]ethylenediamine, green in IV, blue in alkali, which later transformed into the stable form, blue in IV and brown in alkali.

IT 861083-60-5P, Anthraquinone,  
1,1'-(s-dianilinoethylene)bis[3-anilino-2-hydroxy- 866996-95-4P,  
Anthraquinone, 1,1'-(s-diaminoethylene)bis[3-amino-2-hydroxy-  
RL: PREP (Preparation)  
(preparation of)

RN 861083-60-5 CAPLUS

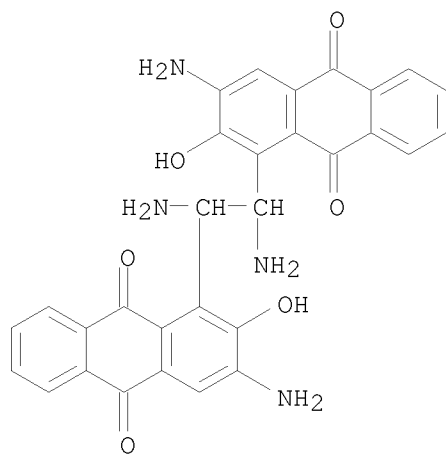
CN Anthraquinone, 1,1'-(s-dianilinoethylene)bis[3-anilino-2-hydroxy- (3CI)

(CA INDEX NAME)



RN 866996-95-4 CAPLUS

CN Anthraquinone, 1,1'-(s-diaminoethylene)bis[3-amino-2-hydroxy- (3CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE

ENTRY

248.66

SINCE FILE

ENTRY

-36.08

TOTAL

SESSION

435.26

TOTAL

SESSION

-36.08

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 15:11:59 ON 12 JAN 2009

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